

# ENGINEERING GEOLOGY DIVISION NEWSLETTER

(February 1997 Issue)

## CHAIRPERSON'S COLUMN

(by Helen L. Delano)

As I look at the Berkey gavel which will decorate my desk for the next year, I am reminded that the Engineering Geology Division of GSA has a noble history. We are celebrating our 50th year in 1997, and this is a significant achievement. We need, however to concentrate our energies on the future, and determine how best to continue to serve our members and promote the field of Engineering Geology. GSA as a whole has seen memberships in divisions decrease. The reasons for this are not clearly known, and the Society is struggling with whether and how to do something about it. Geology and science as a whole are struggling with issues of public perception or lack thereof. How should the Engineering Geology Division of GSA be responding to these and other challenges?

What does the division do? What should we be doing? A brief review of our primary activities shows that a fair amount does get accomplished in the average year. The Engineering Geology Division is responsible for advocating and organizing the Engineering and Environmental Geology technical sessions at GSA annual meetings through our participation in on the Joint Technical Program Committee and by sponsoring symposia and theme sessions. We organize and sponsor short-courses and field trips at the national GSA meetings. We publish the results of division symposia and other research in the Engineering Geology Case Histories and Reviews in Engineering Geology series of GSA publications. We sponsor and award research grants to students pursuing research in Engineering Geology topics. We recognize excellent publications in Engineering Geology with the E.B.Burwell Award each year. We co-sponsor (with AEG) the Jahns Lectureship to increase awareness of Engineering Geology in Colleges and Universities. And finally, we publish regular newsletters to advise members of new developments and opportunities.

Many of these activities go on with very little input from the general membership of the division. We hope that this will begin to change. The division leadership should be responsive to the members in determining what the division does. This requires two-way communication. We have several new efforts aimed at improving communications. Robert Larson has agreed to shoulder the chore of editing the newsletter this year. Many of you will read this in a new electronic version of the division newsletter. We will continue a paper newsletter for those who do not have, or prefer not to use e-mail, but the new version should allow more timely transfer of information to the growing number of folks who are on-line. We are developing a world wide web page for the division. Basic information about officers and activities is available at <http://geoweb.tamu.edu/courses/geol101/giardino/engineeringgeology/edg.html> . You can also access the site through GSA's site at <http://www.geosociety.org>. All of the division officers have e-mail addresses, and welcome constructive input from division members.

How can you participate? Many ways. Present papers on your research, case histories and new developments at sectional and national GSA meetings. Consider GSA journals when you, your

colleagues or students have information to publish. Environmental and Engineering Geoscience is doing well, but can always use more good papers. Send us notice of relevant meetings and field trips to be included in the newsletter and web site. Organize a session (or suggest a topic to the officers) at a section or national GSA meeting on an engineering geology theme, and consider collecting the written papers for publication. Nominate good papers and books for the Burwell award or the Frey Environmental Geology award. Nominate a particularly inspiring speaker for the Jahns Lectureship. Suggest or organize short courses or field trips at GSA meetings. Encourage students doing engineering or environmental geology research to apply for GSA research grants.

The division needs guidance from its members on the directions you want to see us go. There are no guarantees that your suggestion will be carried to fruition, but if you don't make it, nothing will happen. We must work within the structure of the larger society, but for your division officers to represent your interests to GSA headquarters, we must hear from you.

I hope that the beginning of the divisions second half century will reflect the same interest, dedication and energy that guided the first. Our science and our society are changing with the times. We must determine how to retain the fundamentals and how to change to meet the new pressures. Our only resource is you, our membership.

## **REQUEST FOR NOMINATIONS FOR DIVISION AWARDS**

The Burwell Award is given for the top publication in engineering and environmental geology published during the past five years. Nominations for the 1998 Burwell Award should be sent by December 31, 1997 to: Scott Burns, Dept. of Geology, P.O. Box 751, Portland State University, Portland, Oregon 97207 (or FAX 503-725-3025 or email: [scott@ch1.ch.pdx.edu](mailto:scott@ch1.ch.pdx.edu)).

## **1996 ANNUAL MEETING SYMPOSIUM A SUCCESS**

The annual EGD symposium, organized this year by Helen Delano, and entitled "Engineering Geology Applications of Geologic Maps" was a great success. Your editor heard several favorable comments, primarily on the experience of the speakers at presenting the subject matter. Congratulations to presenters Scott Burns, Robert Larson, Perry H. Rahn, William C. Haneberg, Jeff Keaton, Margaret Thompson, Chuck Welby(standing in for Jeff Reid), and Gary N. Meyer. Our Jahns Lecturer, Dave Rogers, presented his talk on the St. Francis Dam failure at the end of the symposium. This is a great talk, which Dave has kept improving through the years.

## **1997 GSA ANNUAL MEETING IN SALT LAKE CITY**

Deadline for submission of abstracts: July 7, 1997 The Engineering Geology Division is planning to mark its 50th anniversary at the 1997 Annual Meeting in Salt Lake City by sponsoring, co-sponsoring, or otherwise supporting a number of events that we hope you will find interesting.

--A pre-meeting field trip "Neotectonics, fault segmentation and geological hazards along the Hurricane

fault in Utah and Arizona" offered Thursday to Saturday, October 16-18, by Meg Stewart, Wanda Taylor, Philip Pearthree, Barry Solomon, and Hugh Hurlow (~\$275).

--Another pre-meeting field trip "Geologic hazards of the Wasatch Front" offered Sunday, October 19, by Michael Hylland of the Utah Geological Survey (~\$55).

--A short-course on the use of geostatistics to help solve environmental problems, presented by Sean McKenna and \_\_\_\_ of Sandia National Lab on Saturday and Sunday, October 18 and 19.

--A proposed theme session Tuesday, October 21, on "The hydrogeology of landslides" convened by Robert Larson.

--A proposed symposium on Wednesday, October 22, "Celebrating 50 years of the Engineering Geology Division: The past, present and future of Geoscience in the public interest" convened by Vince Cronin.

--The Jahns Lecture by Don Deere, to be scheduled as the final presentation in the 50th anniversary symposium.

--The annual EGD business luncheon and awards ceremony, Wednesday, October 22, at noon.

--A syn-meeting field trip "Bedrock geology of the Snyderville Basin, Summit County, Utah" led by Frank Ashland, Kelly Keighley and Jim Evans (~\$50). This trip will highlight the challenges in developing the water resources of this rapidly expanding area -- one of the venues for the 2002 Winter Olympics.

--A post-meeting field trip "Quaternary geology and geomorphology, northern Henry Mountains" offered Thursday to Sunday, October 23-26, by Ben Everett, Bob Anderson, Greg Dick, Alan Howard, and Andy Godfrey (~\$300).

In addition, EGD will once again have a display in the poster area of the exhibition hall throughout the week, which can serve as a meeting place for our membership throughout the meeting.

## **ANNUAL EGD SYMPOSIUM**

The EGD symposium at the Annual Meeting in Salt Lake City will celebrate the 50th anniversary of the founding of our division. We will take this opportunity to consider the past, present, and possible future development of important themes in engineering geoscience, including slope failure, coastal evolution, seismic hazard assessment, control and management of surface/subsurface water, waste/pollution management, and site assessment. Suggestions for invited presentations are welcome -- please contact Vince Cronin, Geosciences Department, University of Wisconsin-Milwaukee, P.O. Box 413, Milwaukee, Wisconsin 53201, telephone (414) 229-3948 or 229-4561, or email (preferred) to [vcronin@csd.uwm.edu](mailto:vcronin@csd.uwm.edu).

## **SHORT COURSE**

***Title:***

Techniques of geostatistical estimation and simulation applied to environmental geology.

**Teachers:**

Dr. Sean A. McKenna of the Geohydrology Department at Sandia National Labs, Albuquerque and Dr. Christopher A. Rautman (same affiliation)

**Summary:**

(taken from the proposal)

"This course will be taught with an example data set taken from the literature. The archetypal problem that will be discussed in this course is that of a two-dimensional, soil contamination problem. There are a limited number of samples defining the extent of the soil contamination and the objective is to create a map showing the likely extent and magnitude of contamination. Additionally, the uncertainty in the extent of contamination must be quantified. The goals of this course are to teach students how to use the geostatistical tools available to define the distribution of a spatially heterogeneous property and the uncertainty inherent in that spatial distribution."

**Length:**

This course is proposed to be a two-day course (Saturday and Sunday) on the weekend preceding the GSA Annual Meeting.

## **HYDROGEOLOGY OF LANDSLIDES - THEME SESSION**

The theme session on landslide hydrogeology is of great practical importance, both locally and globally. We are actively soliciting participation of engineering geologists in the theme session, which will probably be well attended by geologists who work with many damaging landslides along the Wasatch Front and throughout the intermountain West.

**Description:**

The infiltration of water into and percolation of water through landslides of all types will be discussed, including modeling, theoretical aspects, dewatering, monitoring, affect on activation and rate of movement, and case histories. Papers on debris flow generation and rainfall thresholds for failure initiation of previously stable slopes are appropriate.

## **IMPENDING CHANGES TO USGS TOPOGRAPHIC MAPS**

(edited from a document received at the 1996 GSA Annual Meeting)

The U.S. Geological Survey (USGS) is in the process of drastically changing the form and content of 7.5-minute quadrangle topographic maps. The proposed changes will degrade the quality of these maps and have a negative impact on the majority of individuals who use these maps. The proposed changes include, but are not limited to, the following:

1. Topographic contours will no longer be revised, except in cases where specifically requested and funded by individual states. The possibility of completely omitting contours from the printed maps has also been discussed.
2. Woodland areas, shown by green overprint, will not be revised.
3. Buildings will no longer be classified as to type: no distinction will be made between houses, barns, schools, etc.
4. Urban areas will be indicated by a gray tint, and most individual buildings and landmarks will not be identified.
5. The level of content, particularly for features requiring field verification, will be reduced.
6. The quality of print produced from digital maps is generally poor, and the maps are difficult to read.

The U.S. Geological Survey is proposing that digital data for hydrography (streams and lakes), transportation (roads), boundaries (state and county lines), public land surveys, and elevation (digital elevation models, not contours) be revised and maintained in electronic format. The remaining map information (e.g., contours, vegetation, man-made features) would not be maintained.

For more information contact: Donald C. Haney, Chairman, Association of American State Geologists' Subcommittee on Topographic Mapping Tel: (606) 257-5500; Fax: (606) 257-1147 E-mail: [haney@kgs.mm.uky.edu](mailto:haney@kgs.mm.uky.edu)

## **WEB PAGES OF INTEREST**

A great web page to surf to numerous geotechnical related web pages is Gareth Mill's GeoWeb. Stop by this great site at <http://www.pacificnet.net/~gimills/main.html>

### **EGD**

<http://geoweb.tamu.edu/courses/geol101/giardino/engineeringgeology/edg.html>

### **AEG**

<http://geoweb.tamu.edu/aeg>

### **Iceland eruption**

<http://www.itn.is/lio>

### **CDMG Seismic Hazards Maps**

<http://www.consrv.ca.gov/dmg/shezp/>

## **Geological Society of America**

<http://www.geosociety.org/>

## **Geological Society of London**

<http://www.geolsoc.org.uk/homepage.htm>

## **USGS Pasadena Office**

<http://www-socal.wr.usgs.gov/>

## **Northridge EQ Photos**

<http://gldage.cr.usgs.gov/northtemp/execcsum.html>

## **Rock Eng Group of Toronto**

<http://www.rockeng.utoronto.ca>

## **Volcano World**

<http://volcano.und.nodak.edu/>

## **Johnson Space Center**

<http://images.jsc.nasa.gov/>

## **Aurora Page**

<http://www.geo.mtu.edu/weather/aurora>

## **Earthquake info**

<http://execpc.com/~bblick/pinpoint/>

## **Wadsworth Earth Science Resource Center**

<http://www.wadsworth.com/geo>

## **Idaho Geological Survey**

<http://www.uidaho.edu/igs/igs.html>

## **USGS**

<http://www.usgs.gov/>

## **JOURNALS OF INTEREST**

With number and cost of geoscience journals skyrocketing, you may find the following incomplete list of interest. With so many articles published each year, it is very difficult to stay current with cutting edge science. So keep on reading.

Environmental and Engineering Geoscience (AEG/GSA) \$125(\$40/GSA members)/4 issues/year The Quarterly Journal of Engineering Geology (GSL) \$281/4 issues/year Engineering Geology (Elsevier) \$704/8 issues/year Environmental Geosciences (Blackwell Science) \$100/4 issues/year Environmetrics (Wiley) \$475/6 issues/year Earth Surface Processes and Landforms (Wiley) \$950/11 issues/year Natural Hazards (Kluwer Academic Publishers) \$428/6 issues/year Bulletin of the Seismological Society of America (SSA) \$135/6 issues/year

## **SUBMITTING TO THE NEWSLETTER**

Two paper issues of the newsletter are planned this year. Additional electronic newsletters will be sent to members with e-mail and also posted on the Division's web page. Please contribute news of members or the profession to the newsletter editor. Your contribution will help make this newsletter a success. To receive the newsletter by e-mail, GSA needs your e-mail address when you pay your dues. Only about 32% of our Division's members have e-mail, so we will continue to send out paper newsletters.

## **ELECTIONS**

Due to the lack of newsletters last year, no ballots for the election of officers were sent out. Instead, ballots were given to members at the annual luncheon, voted on, counted, and the results announced. This actually increased the number of ballots cast. The following members were elected to the Division's management board.

## **ENGINEERING GEOLOGY MANAGEMENT BOARD**

### **OFFICERS**

#### ***Chair:***

Helen L. Delano

Department of Environmental Resources Pennsylvania Geological Survey

P.O. Box 8453 Harrisburg, PA 17105-8453; Phone: 717-787-6029; Fax: 717-783-7267

e-mail: [hdelano@geo.pader.gov](mailto:hdelano@geo.pader.gov)



***Chair-Elect:***

Vincent S. Cronin, Ph.D. Associate Professor of Geosciences University of Wisconsin-Milwaukee  
P.O. Box 413, Milwaukee, WI 53201; Office: (414) 229-3948 or 229-4561; FAX: (414) 229-5452  
email: vcronin@csd.uwm.edu Web URL: <http://www.uwm.edu/~vcronin>

***Secretary:***

Scott F. Burns Department of Geology Portland State University  
P.O. Box 751 Portland, OR 97207-0751; Direct: 503-725-3389; Dept.: 503-725-3022; Fax:  
503-725-3025  
e-mail: scott@chl.ch.pdx.edu

***Member-at-Large:***

Robert A. Larson Los Angeles County Department of Public Works  
900 South Fremont Ave., 4th Floor Alhambra, CA 91803; Work:818-458-4923; Fax:818-458-4913;  
Home 818-786-8884  
e-mail: 73540.2312@compuserve.com

***Past Chair:***

John R.(Rick) Giardino Associate Director Office of Graduate Studies Texas A&M University  
College Station, TX 77843-1113; Tel.: 409-847-9067; Fax: 409-845-1596  
[jrg@rgs.tamu.edu](mailto:jrg@rgs.tamu.edu)  
<http://geog.tamu.edu/~rick/>