

The Engineering Geologist



THE
GEOLOGICAL SOCIETY
OF AMERICA

NEWSLETTER OF THE ENGINEERING GEOLOGY DIVISION OF THE GEOLOGICAL SOCIETY OF AMERICA

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Chairman's Message

Prior to the GSA National Meeting your new Chairman-Elect Dick Galster and I submitted a number of questions to be discussed at the meeting of the GSA Council regarding the relations between the Engineering Geology Division of GSA and the Association of Engineering Geologists (AEG). Discussions were then held among various present and past members of the Management Board of EGD-GSA, the Executive Committee and full Council of GSA, and with members at the Annual Luncheon. The results of these exchanges of views and some related matters are summarized below.

1. GSA Council members recognized that with the increasing growth and activity of AEG the functions of the Engineering Geology Division are necessarily changing. However, to judge from the response of several members of Council, there is considerable reluctance to the idea of phasing out of EGD-GSA and letting AEG take over its functions. This has been a topic of discussion for some years within the Division and has been brought up in past issues of the Engineering Geologist, but it was a new matter to most Council members. Although there is some concern over possible loss of membership in GSA, the principal thought is that should EGD discontinue its activities there would be a loss of back and forth contact between engineering geologists and people in the fields of geophysics, structural geology, regional geology, geochemistry, hydrology, and so on. This is a valid comment and is supported by the fact that the engineering geology program sessions at the national meetings are almost always very well attended and by a varied audience.

2. There are, according to counsel, no obvious legal impediments to phasing out EGD-GSA, but we all recognize a number of practical problems, such as the continuance of publications, representation on national committees, and the E. B. Burwell, Jr., Memorial Award.

3. No immediate move to discontinue the Division is contemplated. In any event, disbanding the Division would rightly require a change in its by-laws through a majority of those affiliates casting a vote.

4. As many of you know, to make closer the ties between the professional practicing engineering geologists in AEG and those of us who are engaged in more academic and scientific phases of the subject, the AEG has included within its newly amended constitution an added class of Academic and Research Membership (see AEG Newsletter, v. 19, no. 1, January 1976). The experience requirements of this class are at least five academic years in full-time teaching or research in geology or en-

gineering at the college level, rather than the five years of professional work required of full members. The rights and privileges of voting and holding office, and dues, are the same as for Associate Members. This is a significant change in AEG, and we believe it will promote more active cooperation between engineering geologists in our two organizations at both national and local levels. I commend it to your thoughtful attention. You may obtain further information from AEG Membership Chairman, W. C. Paris, Jr., 19004 Queens Cross Lane, Germantown, Maryland 20767.

5. For the first time, the annual national meetings of GSA and AEG in 1977 will be held back-to-back in Seattle in November. As given in more detail elsewhere in this issue of the Engineering Geologist, engineering geology field trips will be held both before the AEG technical sessions and after, in the weekend preceding the GSA meeting. No field trips or general technical sessions on engineering geology will be sponsored by EGD-GSA. Those planning to present papers on engineering geology may wish to submit such papers for the AEG technical sessions. EGD-GSA has agreed to use its traditional time for technical sessions for an all-day symposium on "Capable Faults and Engineering Structures" sponsored by the ASCE-GSA-AEG Intersociety Committee on Engineering Geology to be held on Monday, November 7.

Most practicing engineering geologists who have considered the problem are in favor of back-to-back rather than concurrent meetings of AEG and GSA. Getting what we would consider adequate time for presentation of engineering and environmental geology programs at the National GSA meeting is increasingly difficult. In no way could we provide time during the week of GSA for papers now presented separately at EGD-GSA and AEG. To meet concurrently with GSA and have representation in the Joint Technical Program Committee would require that AEG become an Associated Society with GSA. An Associated Society may meet concurrently with GSA but is not required to do so. It is my understanding that the Board of Directors of AEG has approved in principle becoming an Associated Society, but no formal request has been made to GSA.

6. The Council and your Division Management Board are most desirous of hearing the views of Division members on these subjects. For this purpose we are including a tear-off slip with this issue of the Engineering Geologist, which we wish each of you would return. This is simply to get your views and is not a formal ballot. Amplification by letter would be most welcome.

(continued)

Chairman's Message, continued

Most of your Division officers through the years have participated in the work of both EGD-GSA and AEG. The only real sense of competition between the two organizations has been for the finite time, energy, and personal funds of many of the more active engineering geologists to attend or to prepare and present papers at meetings, serve as officers and committee members, sponsor symposia and edit their products for publica-

tion, support worthy causes, and so on, within two groups having related interests. Although I am among those who would prefer a single organization, I recognize that the two groups have distinct as well as overlapping purposes. Your active participation in helping us define and energetically pursue the aims of the Division is essential. Let's hear from you.

David J. Varnes, *Chairman, EGD-GSA*

Notice to All EGD Members, 1977 Annual Meeting

Because of the proximity in time and location of the GSA and AEG meetings, the Engineering Geology Division will *not* be sponsoring general sessions relating to engineering geology at the Seattle meeting.

The Division is co-sponsoring with the ASCE-GSA-AEG Inter-society Committee on Engineering Geology a *full day* symposium, "Capable Faults and Engineering Structures," to be held on Monday, 7 November.

In lieu of the traditional Division Luncheon, the Division will hold its Annual Business Meeting at a dinner on Monday evening, 7 November.

The Association of Engineering Geologists will hold its annual meeting technical sessions on 2-3 November at the Olympic Hotel in Seattle just ahead of the GSA meeting. Those wishing to submit abstracts to the AEG Program Committee should do so not later than 31 July 1977.

Abstracts should be mailed to:

Program Chairman
A.E.G. Annual Meeting—1977
P.O. Box 25104
Seattle, Washington 98125

No abstract fee is required.

Engineering geology field trips to be sponsored by AEG are as follows:

Trip no. 1: "Dams and Landslides, Columbia River, Washington and Southern British Columbia" (30 Oct.–1 Nov., 3 days)

Trip no. 2: "Teton Dam Failure, Idaho" (4 Nov., 1 day)

Trip no. 3: "Problems of Very Recent Landslides—Cascade Mountain Front—Snoqualmie Falls Underground Power Plant" (4 Nov., 1 day)

Trip no. 4: "Satsop Nuclear Plant, Washington" (5 Nov., 1 day)

Trip no. 5: "Coastal Engineering Geology, Northern Olympic Peninsula" (5 Nov., 1 day)

Additional information relating to the field trips may be obtained from:

Richard W. Galster
U.S. Corps of Engineers
P.O. Box C-3755
Seattle, Washington 98124

Annual Report, 1976

Management Board 1976:

Chairman: James W. Skehan, S. J., Weston, MA
Chairman-elect: David J. Varnes, Denver, CO
Secretary: Richard W. Galster, Seattle, WA
Management Board Rep.: Frank W. Wilson, Lawrence, KA
Past Chairman: Paul L. Hilpman, Kansas City, MO

No Board meetings were held between the Annual Meeting in Salt Lake City in October 1975 and the Annual Meeting in Denver in November 1976. A summary of Board actions at the 1975 meeting is contained in the August 1976 issue of "The Engineering Geologist." Routine business of the Division was carried on by mail and telephone between the various members of the Board.

Membership and Finances:

As of 1 September 1976 the Division had 1,052 members. This represents a decrease in membership of nearly 500 in the past year, over a third of the Division. Accounting for Division finances continues to be a problem as finances are managed as part of the GSA general fund. Ralph Theimann reports that the Division overspent by \$221.00 in 1975.

The following is an estimate of actual and projected expenditures for 1976:

Income	\$2,104
Expenditures	
1975 deficit	\$ 221
Newsletter and mailing	148
Burwell Award	100
Travel support	1,300
Miscellaneous	100
	<u>\$1,869</u>
Projected surplus for 1976	\$ 235

1976 Annual Meeting:

The Division sponsored a symposium on "Expansive Soils," a well-organized effort on the part of Christopher C. Mathewson. A full day of sessions on Engineering and Environmental Geology was also sponsored by the Division. Our representatives on the Joint Technical Program Committee were David J. Varnes and Richard W. Galster.

1977 Management Board:

Chairman: David J. Varnes, Denver, CO
Chairman-elect: Richard W. Galster, Seattle, WA
Secretary: Allen W. Hatheway, Cambridge, MA
Management Board Rep.: Frank W. Wilson, Lawrence, KA
Past Chairman: James W. Skehan, S. J., Weston, MA

Goals for the Management Board for the coming year are as follows:

1. Complete publication of Review and Case History volumes presently in progress.
2. Work for closer ties with the Association of Engineering Geologists, leading ultimately to altering the present

status of the Division so that a single organization may represent the engineering geology profession.

3. Work closely with the AEG 1977 Program Committee to produce a high quality "back-to-back" meeting of GSA and AEG in Seattle in 1977.

Richard W. Galster, *Secretary*

Minutes

Board Meetings, Engineering Geology Division, Geological Society of America, 89th Annual Meeting, Denver Hilton Hotel, November 1976

LUNCHEON BUSINESS MEETING, TUESDAY 9 NOVEMBER, 1200

Results of elections:

David Varnes, Chairman of the Division
Richard Galster, Vice-Chairman
Allen Hatheway, Secretary-Treasurer
Frank Wilson, Management Board Representative

Status of EDG vis a vis AEG: Report by J. W. Skehan

1. We have received word that AEG has voted in favor of applying for status of *associated society* of GSA.
2. AEG, in 1975, changed its constitution to create a new class of member, the *Academic Member*, to accommodate persons interested in engineering geology but who do not qualify for registration as an engineering geologist.
3. GSA Council members recognized that with the increasing vigor displayed by AEG, the role of EGD is necessarily changing.
 - a) Council members voiced considerable concern relating to:
 - 1) future Case Histories volumes
 - 2) future of programs as part of GSA Annual Meetings and concern as to whether such programs would be available to GSA membership, especially if AEG programs were back-to-back with GSA, rather than concurrent. The point was made by Don Deere and others that AEG programs tend to be developed by and for practicing engineering geologists. The need for broader base of interaction between geomorphologists, rock mechanics experts, foundation engineers and other branches of geological science is a need that is now being filled by EGD programs.
 - 3) concern over the increased costs to those EGD members who wish to maintain a speciality status as regards engineering geology.
 - 4) the council sees that the EGD role should be diminished, but that they would be unwilling to phase out EGD unless, and until, all of these concerns are met.
- b) David Varnes met with GSA Council on Sunday PM (7 Nov.), at their request, to discuss these matters.

Engineering Geology Case Histories:

4. There are four Engineering Geology Case History volumes in various stages of completion:
 - a) *Landslides*: ed. by Don Coates. All manuscripts have passed editorial review and are in press at GSA Headquarters.
 - b) *Preservation of Stone*: ed. by Erhard Winkler; in final

stages of editing and will be ready for submittal to GSA Headquarters by 1 January 1977.

- c) *Nuclear Power Plant Siting*: ed. by Allen Hatheway and Cole R. McClure; being edited for press, probably in press by November 1977. All but six manuscripts in hand, final receipt expected by late February 1977.
 - d) *Expansive Soils*: ed. Christopher Mathewson, promised no further details; presumably based on the 1976 EGD Symposium held at the Annual Meeting.
5. UNC on Rock Mechanics: Brief report by EGD Representative Bruce Clark.
 6. Presentation of E. B. Burwell Award: Award made by Committee Chairman Frank Wilson, to Chairman-Elect David Varnes.
 7. Thanks of Outgoing Chairman: Remarks by J. W. Skehan in thanks for assistance during this year as Chairman and especially for the efforts of the Editors of the Engineering Geology Case Histories; to David Varnes for the excellent program he put together for this meeting; to Dick Galster for his guidance regarding deadlines and other Division matters; to Bill Mallio, editor of the *Newsletter*, who will also be able to get out two or three issues next year. Pleased to now step aside and turn the gavel to my successor David Varnes.

INCOMING BOARD MEETING, TUESDAY 9 NOVEMBER, 1400

Present: D. Varnes, P. Hilpman, F. Wilson, E. Dobrovolny, and J. W. Skehan (acting as Secretary).

1. Transfer of Records: Galster to send the Secretary's file to Varnes for his review; Varnes to transmit to Hatheway.
2. Offer of Case History: Christopher Mathewson offered to provide collection of manuscripts based on his Expansive Soils symposium, presented at this Annual Meeting, for submittal to GSA Headquarters about June of 1977. Moved by F. Wilson; seconded by P. Hilpman.
3. Preservation of Stone Volume: Board instructed D. Varnes to notify E. Winkler that we acknowledge his proposed cutoff date for submittal of manuscripts of 1 January 1977 and that we urge that no more papers be accepted after that date, and that those accepted be properly reviewed before publication, according to instructions from GSA Headquarters.
4. Representation on USNC on Tunnelling Technology: Executive Director John Frye asked that EGD propose a replacement for Arthur Cleaves as GSA Representative to the Committee. Motion was made to appoint P. Hilpman to nominate representative; moved, F. Wilson; seconded, J. Skehan.

Allen W. Hatheway, *Secretary, EGD*

E. B. Burwell, Jr., Memorial Award

This is an award given annually to the author or authors of a published paper of distinction which advances knowledge concerning principals or practice of engineering geology, or of the related fields of applied soil or rock mechanics where the role of geology is emphasized.

It consists of two elements: (1) a monetary award, (2) a printed or inscribed certificate.

The 1976 E. B. Burwell, Jr. Memorial Award was given to

David J. Varnes, U.S. Geological Survey, for his publication "The Logic of Geological Maps With Reference to Their Interpretation and Use for Engineering Purposes," U.S. Geological Survey Professional Paper 837 (1974).

The next issue of the Engineering Geologist will contain further information on this award and the method of making nominations.

Atlas of Cape Cod Available Soon

The Environmental Studies Committee of Boston University, and interdisciplinary group of faculty involved in environmental education and research, is planning to publish an environmental atlas of Cape Cod. The atlas will consist of a set of maps dealing with the following topics: topography, geology, vegetation, current land use, coastal processes, groundwater, surface water, water quality, archeological and historical sites, and engineering

properties of surface materials. The maps and associated text will be presented in a manner that will make them of use to the general public. The atlas should be helpful in land-use planning and resource management on Cape Cod. The director of the project is Professor Arthur H. Brownlow, Chairman of the Department of Geology at Boston University.

OFFICERS OF THE ENGINEERING GEOLOGY DIVISION

Year	Meeting at	Chairman	Vice* Chairman	Secretary	Elected	Councillors Appointed
1947	Ottawa	Berkey	Paige	Rhoades	Ries	Cleaves
1948	New York	Berkey	Paige	Rhoades	Ries	Vanderwilt
1949	El Paso	Paige	Vanderwilt	Rhoades	Cleaves	Eckel
1950	Wash., D.C.	Ries	Rhoades	Irwin	Burwell	Wollard
1951	Detroit	Rhoades	Burwell	Trask	Eckel	Dolmage
1952	Boston	Burwell	Eckel	Trask	Money-maker	Philbrick
1953	Toronto	Cleaves	Trask	Philbrick	Melvin	Happ
1954	Los Angeles	Eckel	Philbrick	Coombs	Irwin	Thompson
1955	New Orleans	Philbrick	Irwin	Melvin	Schultz	Thompson
1956	Minneapolis	Irwin	Schultz	Dobrovolsky	Nesbitt	Happ
1957	Atlantic City	Schultz	Dobrovolsky	Nesbitt	Fluhr	—
1958	St. Louis	Dobrovolsky	Nesbitt	Happ	Schwartz	—
1959	Pittsburgh	Leggett	Happ	Kiersch	Schwartz	—
1960	Denver	Happ	Kiersch	Thompson	Schwartz	—
1961	Cincinnati	Kiersch	Bird	Laurence	Hershey	—
1962	Houston	Nesbitt	Thompson	Laurence	Hershey	—
1963	New York	Thompson	Nace	Karpinski	Marliave	—
1964	Miami	Melvin	Ekblaw	Stuart	Marliave	—
1965	Kansas City	Ekblaw	James	Stuart	Deere	—
1966	San Francisco	James	Karpinski	McDonald	Deere	—
1967	New Orleans	Karpinski	Marliave	Hershey	Stuart	—
1968	Mexico City	McDonald	Stuart	Hershey	Gardner	—
1969	Atlantic City	Stuart	Hershey	Gray	Gardner	—
1970	Milwaukee	Hershey	Coombs	Gray	Content	—
1971	Washington	Coombs	Gray	Dixon	Content	—
1972	Minneapolis	Gray	Prescott	Cleaves	Pincus	—
1973	Dallas	Prescott	Pincus	Cleaves	Hilpman	—
1974	Miami	Pincus	Hilpman	Galster	Varnes	—
1975	Salt Lake City	Hilpman	Skehan	Galster	Varnes	—
1976	Denver	Skehan	Varnes	Galster	Wilson	—
1977	Seattle	Varnes	Galster	Hatheway	Wilson	—

*Chairman-Elect after 1964.

DEADLINE FOR NEXT NEWSLETTER

Please submit any copy for the Engineering Geology Division newsletter by September 10, 1977 to:

W. J. Mallio
Kennecott Copper Corporation
128 Spring Street
Lexington, MA 02173

We would like better regional coverage and encourage any and all contributions.

(TEAR OFF QUESTIONNAIRE)

1. Are you in favor of phasing out the Engineering Geology Division of GSA? _____
2. If you answer is "No," what activities of the Division would you wish to see emphasized or discontinued? _____
3. Have you ever participated in any activity of the Division, such as attendance at a technical session, annual luncheon or presentation of a paper on engineering geology at a sectional or national meeting? _____
4. Are you now, or do you intend to become, a member of the Association of Engineering Geologists? _____ What class? (Member, Associate Member, Academic and Research Member, Affiliate Member, Student Member.) _____
5. If answer to 4 is "Yes," would joining AEG cause you to drop membership in GSA? _____

Please send to: D. J. Varnes, U.S. Geological Survey, MS 903, Box 25046, Denver, Colorado 80025