The Engineering Geologist

THE GEOLOGICAL SOCIETY OF AMERICA

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

Volume 25, Number 1 March 1990

CHAIRMAN'S MESSAGE

Next year marks the beginning of the International Decade for Natural Disaster Reduction. The focus of this International Decade, established by the United Nations, is on earthquakes, windstorms (cyclones, tornadoes, typhoons, hurricanes), tsunamis, floods, landslides, volcanic eruptions, wildfires, and insect infestations. Most of these hazards are geologic processes which cause damage repeatedly and responsible methods of dealing with them should be important to members of the Geological Society of America and particularly to members of the Engineering Geology Division (EGD). It is interesting to note that in December 1987, the United Nations replaced the word "hazard" used in the original title of the program with the word "disaster." Perhaps the reason for this change in wording was recognition that some hazards cannot be reduced (e.g., earthquake), but their effects can be mitigated to reduce the extent of the disaster they cause.

Among the fivefold goals of the International Decade are (1) dissemination of existing and new information related to measures for assessment, prediction, prevention, and mitigation of natural disasters; and (2) development of programs of technical assistance and technology transfer, demonstration projects, and education and training. Members of the EGD are well-equipped to participate in aspects of these two goals at the national level, particularly in aspects of assessment and prediction of hazardous processes. Specific activities to be considered were recommended in 1989 by an Advisory Committee to the National research Council and published in *Reducing Disasters' Toll* (Washington, D.C., National Academy Press). Awareness of and the ability to recognize natural hazards needs to be enhanced. This can be done through education activities and EGD members can contribute. Among the specific education activities listed in the 1989 report are (1) development of curricula for elementary and secondary schools to raise the level of awareness of the general public about how to plan for and respond to natural hazards; (2) introduction of hazard mitigation concepts into coursework in architecture, civil engineering, geology, land-use planning, finance, insurance, and other subjects contributing to the hazard reduction cycle; and (3) development of programs that cut across individual hazards, so that mitigation techniques do not work at cross-purposes.

The EGD Management Board recognizes the importance of the international Decade and the contribution the EGD and its members can make. Steps are being taken to establish an EGD Long Range Planning Committee to provide guidance for and continuity in symposia and theme sessions during the international Decade and beyond. Let us know what you think is important and who might be willing to help organize a symposium or theme session on the topic. Get involved!

The DNAG Project is winding down, and the new GSA Program to replace it is SAGE - Science Awareness through Geoscience Education. This Program provides an excellent vehicle to accomplish some of the objectives of the international Decade. EGD Members will be kept informed of International Decade developments as they happen and of opportunities as they become available. EGD Members are encouraged to do more than just read about the developments. Take a leadership position in your local community regarding some aspect of the internationl Decade and then tell the rest of the membership what you did and how it was received. Check in with your local public school district; make yourself available to describe geologic processes and what geoscience professionals do. Contribute to the International Decade and to the SAGE program at the same time.

HYDROGEOLOGY IN THE NEWS
(Not In Her Back Yard)

And now for the winner of the prize for the Most Novel Expression of Environmental Consciousness. It goes to Sandra M. Jarvinen of Norwell, Mass.

Ms. Jarvinen, whose interest in wetlands preservation has gone unrecognized until now, was testifying at the trial of her ex-husband, Joseph Pikul, who is charged with murdering his second wife. Ms. Jarvinen said he arrived at her home allegedly seeking permission to bury the body behind her house.

"I told him it wasn't a good idea to bury anybody on my property because I have a high water table."

PHILADELPHIA INQUIRER
February 10, 1989

PAST CHAIRMAN'S MESSAGE

Service as chairman of the Engineering Geology Division is a form of stewardship. The organization is now more than 40 years old and has developed momentum and a life of its own that will live long past the brief term of a chairman. Nevertheless, chairmanship has led me to ponder where the Division is headed. I found myself wondering if the Division has not begun to drift a little bit. When we had the whole playing field of engineering geology to ourselves, life was easier because we were the spokespeople for the profession in North America. since our founding in t947, however, the Association of Engineering Geologists was organized and has prospered. We need to ask ourselves about our role in this new world. How do we see ourselves relative to AEG? Do we complement each other or do we compete with each other?

My vision is that the Division should be the proponent of research in engineering geology, keeping a special eye out for research in other fields that can advance the profession. As a division of the Geological Society of America we have vast resources on which to draw that place us in a unique position. This role is illustrated by what transpired at the Denver GSA meeting. The Division organized a symposium on geologic hazards that attracted an audience of more than 600 people. Only some of our speakers were "engineering geologists" in the traditional sense yet their talks were relevant to everyone practicing engineering geology today. The speakers were first rate scientists, international experts in their specialties, and members of the Geological Society of America. It was exciting stuff and easy to do at a GSA meeting.

My message is that the Engineering Geology Division needs to redraw its circle of identity. I propose that we take a broader view and accept that engineering geology in the Geological Society of America is the intersection of many geologic sets and encourage participation in the Division from those near the boundaries of these sets. Walter C. Mendenhall, fifth director of the U.S. Geological Survey, summed it up well when he commented that "there can be no applied science without science to apply." The Engineering Geology Division will be the healthier if we encourage our GSA colleagues to join us. Their research is in many cases the scientific platform on which future engineering geologists will base their practice.

Thomas L. Holzer
Past Chairman

D. M. Cruden's Search for Slope Semantics

University of Alberta
Edmonton, Canada T6G 2G7

You may be interested in the enclosed which the University of Chicago's Dictionary of American English claims as the first use of "Landslide" in North America. As the Oxford English Dictionary gives 'Landslide' as a North American word, it seems the world's first named landslide took place in Vicksburg, MS.

NILES' NATIONAL REGISTER - OCT. 6, 1838

CHRONICLE

Land slide in Vicksburg. The Natchez Free Trader describes the beginning of an avalanche or sinking of the earth on the margin of the landing at Vicksburg, MS, which threatens serious damage to the frontstreet of that city. Deep rents in the earth, parallel to the river, were found to have been made as high up as Washington street, nearly opposite to the site of the late Pinckard Hotel, commencing near the bottom of Main street, and running southwardly as far as the railway.

The large warehouse owned by Messrs. Corfrew and Watts, at the upper part of the levee, near the bottom of Maine st., began to give way, and in the course of a day or two, became a ruin, allowing time for the occupants to remove goods, &c. This house was once owned by judge Lane, and rented for $t2,000 per annum; at the present time, it rented for about $8,000 to several occupants, whose business and goods must of necessity be much injured by such a speedy removal. Several other houses are swerving from their perpendicular. The beautiful new house, commenced by Mr. McDowell, nearly opposite the late Pinckard House, has been badly cracked by the sinking of the foundation.

The first movement of the citizens of the flourishing city of Vicksburg, should be to procure a practical geologist to ascertain the true state of the case, both the danger threatened, as well as the injury already done.

GSA Annual Meeting
Engineering Geology Division Activities

There will be lots to do in Dallas at the GSA annual meeting next October. The Engineering Geology Division is planning the following activities on Oct. 29 and 30:

- Poster and Oral Technical Sessions
- Theme Session: "Effects of the Loma Prieta Earthquake".
- Theme Session: Environmental and Engineering Studies for Radioactive Waste Isolation: Experience Based on the Waste Isolation Pilot Plant (WIPP) Project, SE New Mexico".
- Symposium: "Active Tectonics in the Mid-Continent".
- Business Luncheon and Awards Ceremony.

A field trip is planned for October 28: "Engineering and Urban Geology of the Dallas-Ft. Worth Metroplex".

A Short Course "Site Selection for Critical Facilities - The Earth Science Perspective" is planned for October 27.

The final schedule of events has not been finalized. Our technical program depends on participation by EGD members. If you are interested in presenting a paper in a technical or theme session, fill out a GSA Abstract form and send it in before **July 11, 1990.**

Perry H. Rahn
South Dakota School of Mines
and Technology
Department of Geology and
Geological Engineering
Rapid City, South Dakota 57701-3995
(605) 394-2461

MEMBERSHIP IN
THE INTERNATIONAL ASSOCIATION
OF ENGINEERING GEOLOGY

The International Association of Engineering Geology invites you to become a member. The Association publishes a semi-annual journal -- "Bulletin of the International Association of Engineering Geology" -- and sponsors field excursions and symposia on timely topics worldwide. The recent addition of an editorial board to the Bulletin qualifies it as a "refereed journal."

Annual dues for calendar year 1990 are $18 U.S. payable to the U.S. committee for IAEG. If interested, please contact:

R.C. Iisley, Secretary
11425 W. Lake Park Drive
Milwaukee, WI 53224

FRICTION MELTING PHENOMENON IN GEOLOGIC MATERIALS

At the annual meeting of the G.S.A. in Dallas there will be a theme session titled "Friction Melting Processes and Products in Geologic Materials." The session is intended to bring together workers in petrology, geo-engineering, structural geology, geophysics, and other disciplines, to provide a forum for those concerned with friction melting processes. Naturally occurring friction melts (pseudotachylites) have been described from numerous geologic settings, and experimentally generated friction melts have recently been studied. While friction melts have been investigated, few studies have addressed the actual source material, the mechanisms of melting, or the intensive variables at the time of melting. For this theme session, individuals are encouraged to volunteer papers addressing 1) the nature of the source material, 2) the mechanisms of melting, and 3) quantitative constraints on conditions accompanying melting, either in natural or artificially generated friction melts. As usual for G.S.A. theme sessions, volunteered papers will be reviewed by several referees, and papers volunteered for the theme session will be considered for a general session if not accepted for the theme session due to inappropriate content or time limitations. Guidelines for abstract submission and additional information will appear in G.S.A. News & Information. For further information, contact either Jerry Magloughlin (108 Pillsbury Hall, Department of Geology and Geophysics, University of Minnesota, Minneapolis, MN 55455, 612-624-6860) or John Spray (Department of Geology, University of New Brunswick, Fredericton, N.B., E3B 5A3, Canada, 506-0453-4803).

Engineering Geologists Study Tour
to the Soviet Union

A delegation of Engineering Geologists from the Association of Engineering Geologists has been invited to visit the Soviet Union in July of 1990 under the auspices of People to People International. The American

delegation will represent various aspects of engineering geology in technical and professional exchanges with their Soviet counterparts. Your background and interests will contribute to this study mission and as the appointed delegation leader, I hope you will be able to join me in this exclusive project.

During our 15-day trip, we will visit with administrators of the Union of Scientific and Engineering Societies, with on site visitations of their geological facilities and points of ecologic interest in various parts of the Soviet Union. The cities being visited in the Soviet Union are Leningrad, Kharkov, Rostov and Moscow. One day will be spent visiting in Helsinki, Finland on both the arrival and departure flights.

In meetings with our Soviet colleagues, we will discuss topics such as:

Computer Utilization; Foundation of Structures [large buildings and dams]; Seismicity [buildings and structures]; Ground-Water [transmission and well development]; and Ground-Water Quality [including hazardous waste containment].

Once our team is formed, we will identify additional and more specific topics for presentations and discussions. The topics need not be limited to your specific areas of interest. They should reflect the highest level of discipline in the United States and, where appropriate, the current state of related subjects in the field.

Never before has the need been so great for Americans to establish meaningful relations with their professional counterparts in the Soviet Union. This People to People study mission will enable us to get to know our Soviet colleagues, to observe their techniques and to discover which of their problems or successes are similar to and which are different from ours.

We will have opportunities to talk informally with our colleagues and to observe firsthand the difference in our respective systems. We will also have an opportunity to learn what affect the new policy of perestroika is having on our counterparts in the engineering profession.

Our delegation will convene on July 9, and will return on July 23, 1990. The cost per delegate, listed in the enclosed itinerary brochure, includes all meetings and activities, transportation, accommodations and meals from the gateway city. In addition to the professional meetings and site visits arranged for our delegation, special sightseeing programs will be planned for us in each city which we will be visiting. We will also participate in evening cultural programs in Moscow and Leningrad. Spouses are encouraged and invited to participate. Should the professional counterpart meetings be limited to only the professional participants, a separate program will be arranged for the spouses.

Since People to People is a voluntary citizen effort, participants are responsible for their own expenses. This study mission is designed to comply with Sec. 162 of the tax code for deduction as a business expense to maintain or improve one's professional and/or business skills. Professionals should consult with their tax counsel to determine the tax deductible portion of this mission. To comply with the substantiation requirements, a journal will be maintained and following the conclusion of the project, it will be published and supplied to each delegate or couple.

The administrating agency, American People Ambassador Program, working under the auspices of People to People international [founded in 1956 by President Dwight D. Eisenhower], will coordinate all professional arrangements.

Don't delay as participation is limited and will be determined in the order registrations are received. To accept your selection as a delegate on this exclusive mission, please contact me or the Travel Specialists at American Group Travel international. Their TOLL-FREE number is 1-800-777-0067. We will look forward to hearing from you.

Edwin A. Blackey, Jr.
Executive Director
Association of Engineering Geologist
323 Boston Post Rd., Suite 2D
Sudbury, MA 01776
(508) 443-4639

NEW PUBLICATION RELEASED

Bulletin 78: Engineering Geology in Washington, two volumes, 1,234 pages. Coordinated by Richard W. Galster, chairman, Centennial Volume Committee of the Washington State Section, Association of Engineering Geologists. The two volumes will be sold as a set, at a total price of $27.83 plus $2.17 tax (Washington residents only) = $30.00

The volumes, prepared as a Washington centennial commemoration project, include a series of generic papers relating to engineering geology and its practice in the state, followed by case histories of more than 100 Washington projects.

The engineering case histories are divided into chapters on dams, the Columbia Ba Reclamation Project, nuclear and coal-fi power plants, urban geology, transportation routes, rural development, ground water, waste disposal, coastal and marine engineering

geology, and the engineering geology aspects of the 1980 eruption of Mount St. Helens.

This volume represents the efforts of more than 100 authors over a period of 2 1/2 years; published early in July to help celebrate the Washington state centennial. This seems to be a great bargain.

Make checks payable to Department of Natural Resources. Mail Stop PY-12, Olympia, WA 98504.

ASSOCIATION OF ENGINEERING GEOLOGISTS

Ground-water Policy Statement

Ground water historically has played an important role in the practice of Engineering Geology. Consequently, it is the policy of the Association of Engineering Geologists to assist its members and the public in understanding the need for proper management of ground-water resources, including the protection of ground water from pollution and contamination. It is also the policy of the Association to aid the public in evaluation of hazards and associated risks of ground-water pollution and contamination as well as any changes in ground-water availability from projects on which members work.

The Association promotes research and the application of research results to wise management of ground-water resources and their protection, and the Association emphasizes that the most effective policies for ground-water protection are those based upon a sound understanding of the hydrologic cycle and the geologic relationships controlling water and contaminant accumulation and movement in the subsurface. Any preventive or remedial plan for ground-water contamination must be based upon an adequate and correct understanding of both the regional and site-specific hydrologic regimes and also on knowledge of the unique behavior and fate of individual contaminants when they enter the hydrologic cycle.

The Association recognizes and emphasizes that the most effective way to prevent ground-water pollution and contamination is to contain potential pollutants at the ground surface, and the Association supports those legislative and industrial policies and actions which reduce the possibility that pollutants from man-made sources may enter the hydrologic cycle. Among these policies and actions are recycling of processing chemicals and associated wastes, reduction of volumes of the processing chemicals used, sound methods of transport, storage, and handling of potential pollutants, and substitution of less hazardous materials where possible.

The Association also recognizes that any aquifer classification system based upon water quality standards must take into account: (1) the diverse ways water on the surface reaches ground water; (2) the length of time for aquifer recharge; (3) the importance or potential importance of the aquifer as a water supply source; (4) whether or not the aquifer discharges to surface water; (5) the natural chemical composition of the water and (6) the manner by which the classification system is to be regulated.

Finally, the Association encourages its members to be cognizant of both the short-term and long-term effects of a given project on both ground-water quantity and quality; to use their professional expertise to minimize or eliminate any risk of ground-water contamination; and to inform the public of the possible effects of a project on the availability and usability of ground water underlying the project and adjacent areas.

ENGINEERING GEOLOGY FIELD MANUAL PUBLISHED

The U.S. Bureau of Reclamation has just published an "Engineering Geology Field Manual." This manual was written by Reclamation geologists for in-house use. It consists of chapters that relate to a "how-to" theme.

The manual is available from the Superintendent of documents, U.S. Government Printing Office, Washington, D.C. 20402 and from the Bureau of Reclamation, Denver Office, Denver Federal Center, P.O. Box 25007, Denver, Colorado 80225-0007, Attention D-7923-A.

The price is $23.00 per copy.

40th ANNIVERSARY AWARD

Largely through the efforts of Dave Cruden, a past chairman of the Engineering Geology Division, the Division was able to raise sufficient funds to support an annual research grant of about $500. The award commemorates the 40th anniversary of the founding of the Engineering Geology Division. The Management Board has refrained from making an award until the principal reached a high enough level to sustain the award. The Board is considering making the first award in 1990. Because the award is so modest, we are interested in members' opinions on how and when to proceed. We of course are still interested in contributions to the principal. To make a donation, please send your contribution to:

Geological Society of America Foundation, Inc.
3300 Penrose Place
P.O. Box 9140
Boulder, CO 80301
Attn: EGD 40th Anniversary Award

George Kiersch accepts Meritorious Service Award from 1989 Chairman Tom Holzer - 11/06/89

MERITORIOUS SERVICE AWARD FOR 1989

GEORGE A. KIERSCH

Citation

The Meritorious Service Award of the Engineering Geology Division of the Geological Society of America is hereby presented to **GEORGE A. KIERSCH** for giving generously of his time and expertise for four decades. His stewardship and editing of the Decade of North America Centennial Special Volume 3, **The Heritage of Engineering Geology; The First Hundred Years**, will be a legacy for future generations of engineering geologists.

Jerome DeGraff and Bob Johnson accept Burwell Award from 1989 Chairman Tom Holzer. (Acting for Burwell Committee is Bob Schuster) - 11-06-89

DISTINGUISHED PRACTICE AWARD FOR 1989

WILLIAM R. JUDD

Citation

The Distinguished Practice Award is presented to **WILLIAM R. JUDD** in recognition of a career as a teacher and an advisor with sustained eminence in engineering geology. As a founder of the U.S. National Committee on Rock Mechanics, editor for many years of the International Journal of Engineering Geology, author with Krynine of the first major book on engineering geology of which there were 19 printings, and through his many publications and lectures worldwide, he contributed notably to the growth and enhancement of the profession of engineering geology, wherefore this recognition is given.

E. B. BURWELL, JR., MEMORIAL AWARD

PROFESSOR ROBERT B. JOHNSON of Colorado State University and **JEROME V. DeGRAFF** of the National Forest Service are the 1989 winners of the E. B. Burwell, Jr., Memorial Award. The award is made to the authors of a published paper of distinction which advances knowledge concerning principles or practice of engineering geology. They were selected for their textbook, "Principles of Engineering Geology" which was published by John Wiley in 1988. The award was formally presented at the business meeting in St. Louis following the Engineering Geology Division annual luncheon on November 6, 1989.

Jeff Keaton gives Tom Holzer the "Berkey gavel" - 11/06/89

1990 EGD/AEG RICHARD H. JAHNS DISTINGUISHED LECTURER

ROBERT L. SHUSTER

The Richard H. Jahns Distinguished Lecturers are individuals who have achieved outstanding research in engineering geology or whose work has relevance of geology to engineered work(s). The lecturer program is jointly sponsored by GSA and AEG.

A brief summary of Robert L. Shuster's presentation is provided below. Any interested schools

should contract the speaker directly.

Robert L. Shuster
Engineering Geologist
U.S. Geological Survey
Address: Branch of Geologic Risk Assessment
U.S. Geological Survey
Box 25046, MS 966
Denver, CO 80225

Phone: (303) 236-1633

LANDSLIDE DAMS: A WORLDWIDE HAZARD

by

Robert L. Shuster
U.S. Geological Survey
Branch of Geologic Risk Assessment
Golden, Colorado

Dr. Shuster will discuss the causes, effects, and control of natural dams formed by landslides. In this century, landslide dams, which have reached heights as great or greater than the world's largest constructed dams, have proved to be significant hazards in many parts of the world, including the western United States. They form in all kinds of physiographic settings, ranging from rock avalanches in steep-walled narrow valleys to sensitive-clay failures in relatively flat river lowlands.

Lakes formed by landslide dams may last for several minutes or several thousand years, depending on many factors, including volume, texture, and sorting of the blockage material, rates of seepage through the blockage, and rates of flow into the newly formed reservoir. Sooner or later, however, nearly all landslide dams are overtopped by their impoundments unless outlet structures are built. Many of these dams have failed catastrophically, causing major downstream flooding. Casualties from some of these floods have numbered into the thousands.

In the United States, two major landslides within the last 10 years have blocked streams, forming large lakes that have been hazardous to downstream populations. The 1980 2.8-km^3 debris avalanche on Mount St. Helens dammed the main stem and tributaries of the North Fork Toutle River, forming several lakes. The three largest of these, Spirit, Coldwater, and Castle Lakes, still exist, but their levels and volumes have been stabilized by the construction of outlet structures. The 1983 Thistle landslide dammed the Spanish Fork River in central Utah, forming a 98-million m^3 lake that inundated the small town of Thistle, resulting in the loss of 15 businesses, 10 homes and railway switching yards. Costs of the Thistle landslide and resulting upstream flooding have been estimated at more than $200 million. Because of the danger posed by this large lake, it was soon drained by a 4.25-m-diameter drainage tunnel constructed through the dam.

COMMENTS FROM JAMES E. SLOSSON, THE RICHARD H. JAHNS DISTINGUISHED LECTURER 1989

The first year of the Richard H. Jahns Distinguished Lecture Program has been very enjoyable and I have had the pleasure meeting, to date, over 400 undergraduate and graduate students. The majority demonstrated a sincere interest in engineering geology and their responses suggest that 5% to 10% will pursue engineering geology, hydrogeology, or environmental geology. If this pattern is correct, it appears that the lecture series has been a success and, hopefully, a tribute to Dick Jahns.

During the Spring quarter or semester, I visited BYU, Ricks College & Idaho State, Boise State, University of Colorado, Colorado State University, Colorado School of Mines, Baylor University, and Texas A&M. In the fall, I am already scheduled to University of Wisconsin, Milwaukee and Madison branches, as well as the University of Nebraska, Omaha and Lincoln branches and, tentatively, Stanford. Hopefully, the second series will be as successful as the first half.

SECOND INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS, 1991.

The University of Missouri-Rolla had hosted a very successful conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics in May 1981. It has been decided that the Second International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics will be held in 1991, after 10 years of the first one.

We have made the following spade work so far:

1. A Steering Committee of the Conference has been appointed.

2. A tentative list of the Themes of Discussion has been prepared in consultation with participants of the 1981 Conference and on advice by the members of the Steering Committee.

We are requesting co-sponsorship of like minded National and International organizations who have interest in the subject matter of the conference. The sponsors will help promote the conference amongst their

members, make their mailing lists available at no cost to us for mailing information to the members and send delegates to the conference. In lieu of the above, they may nominate one representative on the Organizing Committee of the conference.

The Steering Committee has identified your organization for this purpose. You are therefore requested please to agree to cosponsor this conference.

With, cooperation of your organization, as well as several other National and International Organizations, it is believed that the Second International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, 1991, will be a landmark conference.

Shamsher Prakash
Conference Chairman
University of Missouri-Rolla
Butler-Carlton Civil Engineering Hall
Rolla, MO 65401-0249
(314) 341-4461

INTERNATIONAL ASSOCIATION OF ENGINEERING GEOLOGY

INTERNATIONAL SYMPOSIUM ON

ENGINEERING GEOLOGY PROBLEMS IN STRUCTURED SOILS
(residual soils, concretionned or cemented soils, etc...)

Yamoussoukro (Ivory Coast)
April 9-13, 1990

Organized by:

the Ivorian Association of Engineering Geology

Symposium AIGI Secretariat
Laboratoire du Batiment et des Travaux Publics
04 BP 3 ABIDJAN 04, Cote d'Ivoire
Telephone: (225) 36.79.20
Telex: 42169 LBTPCI

NATIONAL COLLOQUIUM ON PROFESSIONAL REGISTRATION

We want to bring together representatives from academia, the consulting arena, state boards of registration, state and local agency geologists, and professional and scientific geological societies, as well as other interested people, for a one-day conference. The format will include volunteered and invited papers and panel discussions focused on the advantages and disadvantages, the issues and non-issues, the past and the future of professional registration for geologists. Proceedings will be published by AEG.

Suggestions and requests for future informati about the colloquium are welcome.

Robert E. Tepel, Chairperson
AEG Committee on Professional Registration
767 Lemonwood Ct.
San Jose, CA 95120

ANNOUNCING

The Allegheny-Ohio Section Hosts the 33rd AEG Meeting

"Engineering Geology for the 90's"

October 1-5, 1990

The Allegheny-Ohio Section of The Association of Engineering Geologists (AEG) will host the 33rd Annual AEG Meeting to be held October 1-5, 1990, at the Hilton & Towers in Pittsburgh, Pennsylvania.

Some 450 to 500 engineering geologists and related service and equipment professionals are expected to attend the 1990 Meeting. The theme of t meeting, "Engineering Geology for the 90's," will offer a broad based program including technical sessions, symposia and short courses. The technical sessions will focus on the following topics:

- Dam Foundation and Rehabilitation
- Applying Computer-Based Technology to Landslide Problems
- Rock Slopes
- River and Lakeshore Stability and Erosion
- Hydrogeology/Hazardous Waste
- Problems of Appalachian Geology

Two one-day symposia are scheduled. One symposium is being organized by the AEG Committee on Subsidence and is titled "Mine Subsidence - Prediction and Control." This symposia will include 15-20 papers on the state-of-the-art prediction and control of mine subsidence. The other symposium is being arranged by the AEG Committee on Professional Registration and will address issues regarding the history of professional registration, need for professional registration, and the current status of professional registration for geologists.

Three half-day short courses are being scheduled conjunction with the 33rd Annual Meeting:

- Monday, October 1: "Applications of

Microcomputers to Rock Slope Stability Analysis" offered by Drs. Skip Watts, Terry West, and Robert Whisonant.

o Monday, October 1: "Geologic Aspects and Design of Solid Waste Landfills with Applications of Geotextiles" to be offered by Dr. Terry West and Mr. Lon Cooper.

o Thursday, October 4: "Geologic Aspects of Site Characterization for High-Level Nuclear Waste Disposal" offered by Dr. Richard Craig.

The meeting will also feature field trips, local Pittsburgh geology tours, a spouse/guest program, an exhibit program with more than 40 booths, and several social functions have been scheduled to bring attendees together. For further information call AEG, MEMS 800-343-5129 or 800-441-1674 (PA residents).

ITALIAN LANDSLIDE COURSES

Newsletter readers are missing a significant opportunity by not taking advantage of a month-long session on landslide and flood hazards given in Perugia each summer. Perugia is a magnificent Etruscan and Medieval town in central Italy within a 2 hour train ride from Florence, Rome, and other attractions. The workshops are given in English by mainly senior U.S. Geological Survey instructors who have an international reputation as leaders in their given field. The Italian government pays for this workshop to provide state-of-the-art instruction on landslide and flood hazard analysis to young Italian scientists, university instructors, and consultants. Participants are expected to attend 2 courses each day, 2 lab or seminar sessions a week, and field trips to landslide and cultural localities during the week and on some weekends. Participants are also expected to stay the entire month. Meals and lodging, costing about $1,500, and instruction are provided at a lovely villa near Perugia. A few spouses, but not children, can also be accommodated. A small number of geologists, engineers, geographers, and foresters from the United States and any other country would be welcome. The workshop next year will begin June 11 and end July 6. The following courses will be given:

Techniques for reducing landslide hazards by William J. Kockelman

Landslide and debris flow modeling by William Savage

Dating the occurrence and recurrence of hazardous geologic processes by A.M. Sarna-Wojcicki and D.R. Harden

Regional assessment of ground-water quality hazards by William M. Alley

Mass movement, flooding, and sedimentation hazards associated with explosive volcanism and other types of landscape disturbances: a conceptual approach by Thomas C. Pierson

If you are interested in attending, express this interest in writing to: Fausto Guzzetti, CNR, Istituto di Ricerca per la Protezione Idrogeologica nell'Italia Centrale, Via Madonna Alta 126, 06100 Perugia, Italy. Send a copy of the letter to: Earl Brabb, 3262 Ross Rd., Pala Alto, CA 94303. Indicate your present employment situation, educational level, and which 2 courses you would like to take.

PART I

HISTORY AND PROFESSIONAL DEVELOPMENT OF ENGINEERING GEOLOGY

CHAPTER 4

HISTORY AND HERITAGE OF ENGINEERING GEOLOGY DIVISION, GEOLOGICAL SOCIETY AMERICA, 1940s –

By

George A. Kiersch
Chairman of Division 1979-1980
Emeritus Professor, Cornell University
Ithaca, New York

Allen W. Hatheway
Chairman of Division 1960-1961
University of Missouri-Rolla
Rolla, Missouri

ABSTRACT

In 1946-1947 the emerging field of Engineering Geology became the focus for establishing the first special-interest Division of the Society and the model for the subsequent formation of nine additional specialty Divisions (1959-1985) that today exert much of the influence of the Geological Society of America.

Flushed with a sense of purpose and accomplishment of civil construction fed by the reclamation and flood-control-oriented projects in the 1930s, and further tempered with the World War II military construction experience, leading engineering geologists in government, industry, and academia, met informally in 1946 at Chicago meeting of Society to investigate the willingness of the society or another group to sponsor engineering geology. After spirited discussions on other alternatives, receiving encouragement from Dr. Aldrich, GSA Secretary, the pioneering group of eleven Fellows submitted a petition to Council on March 20, 1947. A Division status was granted at the Council meeting of April 1947, following the precedent of the long-standing Cordilleran Section. The founding group and other colleagues formalized the Division with the first meeting at the Ottawa, Canada meeting of the Society in 1947.

The Division's expectation to create a better means of disseminating geologic knowledge for application to the needs of mankind has been realized over the past 40 years (four decades).

In less than three years, the Engineering Geology Division (EGD) had assembled and published the landmark Berkey Volume, setting a vigorous and exciting pace and style for succeeding years. Quickly the EGD gathered momentum and gained world-wide attention as the leader in the growing discipline of engineering geology.

A unique mix of academic and strongly motivated industrial and governmental engineering geologists has always given generously of time and effort to provide leadership for the EGD in its efforts to disseminate information on the siting and construction of engineered works. For the past twenty years, an average of ten percent of all GSA members maintained an affiliation with the Engineering Geology Division; the largest membership of the ten divisions.

The major theme of all EGD activities has always been -- a broadly-based, knowledge of geological sciences is needed to provide the suitable recommendations requested by engineers whether for civil, mining, petroleum, or environmental endeavors. This need for and focus on the geological sciences has consistently given EGD a strong position from which to attract a wide variety of talented GSA members for participation in its Division activities and as authors for its series of publications.

The Division publications are respected worldwide and used frequently for coursework in the theory and/or practice of engineering geology. The Case Histories series, initiated in 1957, has proved very popular and twelve separate volumes have been published to date. The Review Volumes in Engineering Geology, dealing periodically with major topics of the field, began in 1962 and eight have been released. In addition, four special publications, as the Berkey and Heritage Volumes and separate reports, have been sponsored by the Division.

The prestigious Burwell Award for the outstanding published paper that advances knowledge of engineering geology principles or practice was established in 1968. Another annual award is for Meritorious Service to recognize the outstanding efforts of deserving Division members.

The Distinguished Practice Award established in 1982 honors outstanding individuals for their continuing contributions to the technical or professional stature of engineering geology. The recipient need not be a member of the Society/Division.

Division activities in the next decade will increase to serve the enhanced image of engineering geology and the growing acceptance of and potential for applied geosciences. Among the expanding needs are in the safeguard of human health and our resources, the mitigation of geologic hazards, and the affects of engineering works on the environs. The first financial award for research in engineering geology to be supported by the GSA Foundation, in cooperation with Division will begin in 1990s.

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- NEWSLETTER -

ENGINEERING GEOLOGY DIVISION

Year	Month	Volume	Number
'65	Sept.	7	3
1966	April	1	1
1966	July	1	2
1966	Oct.	1	3
1967	Jan.	2	1
1967	April	2	2
1967	July, Oct.	2	3 & 4
1968	Sept.	3	1, 2 & 3
1969	Feb.	4	1
1969	May	4	2
1969	Aug.	4	3
1969	Nov.	4	4
1970	March	5	1
1970	Sept.	5	2
1971	Feb.	6	1
1971	Sept.	6	2
1972	Sept.	7	1
72	Oct.	7	2
1973	March	8	1
1973	May	8	2
1973	Sept.	8	3
1974	March	9	1
1974	June	9	2
1974	Oct.	9	3
1975	May	10	1
1975	Sept.	10	2
1976	Aug.	11	1
1977	July	12	1
1978	April	13	1
1978	Sept.	13	2
1979	Aug.	14	1
1979	Sept.	14	2
1980	Jan.	15	1
1980	April	15	2
80	July	15	3
1980	Oct.	15	4
1981	Feb.	16	1
1981	May	16	2
1981	November	16	3
1982	March	17	1
1982	September	17	2
1983	June	18	1
1984	March	19	1
1985	January	20	1
1985	April	20	2
1985	July	20	3
1985	October	20	4
1986	January	21	1
1986	April/July	21	2/3