



Message from the Chair

By Syed E. Hasan

Let me, at the outset, offer my sincere thanks to the members and management board of the Engineering Geology Division (EGD) for electing me to the Chair's position. As Sue Cannon, the outgoing Chair passed on the Berkey Gavel to me, I could not help remembering the fact that this *same* gavel was once in the hands of famous engineering geologists like Robert Legget, George Kiersch, Gordon Prescott, Richard Jahns, Ellis Krinitzsky and others. There was a mixed feeling of humility and apprehension as I held the gavel in my hand: Humbling to realize that I am joining the ranks of these "past chairs" who have left an indelible mark on the engineering geology profession, and apprehension to live up to the high standards that have been set for this office. All I want to say now is: I'll try my best to live up to your expectations and would leave it to you and time to decide how did I fare?



Syed after receiving the Berkey gavel from Past Chair, Sue Cannon.

One of the first things that struck me as I assumed the Chair's position was the fact that EGD is the oldest of 17 GSA divisions, and the year 2007 will mark the 60th year of its founding. This is a fabulous achievement for the Division, and it needs to be celebrated in a big way. The management board (see the officers' list on page 5) is working on several ideas, one of which is to dedicate the year 2007 to celebrate contributions of James Slosson—whose unflinching but

persistent efforts resulted in adoption of geologic factors into building codes, adoption of the standard of practice, licensure requirements and much more. It is not possible in the limited space to enumerate Jim's contributions to our profession, but I am pleased to inform you that we're planning to honor him by organizing a number of technical sessions at the 2007 annual meetings of GSA (Denver, Oct. 28-Nov. 1) and AEG (Los Angeles, Sept. 24-29). Please stay tuned and watch for announcements and emails from Vince Cronin for assistance in putting together the technical sessions and also for a special volume in honor of Jim Slosson.

Like all other professions, engineering geology also has seen its "ups and downs." With the days of building major dams in the U.S. and western countries behind us, one may think that engineering geology does not have much future here. But the fact is that as long as humans remain on the earth, there will be need for infrastructure, and that in itself is an assurance that engineering geologists will be in demand. Another dimension is the ever-increasing frequency and magnitude of hazardous earth processes that would require a great deal of work to minimize the impact of these processes by designing safe structures that take into account geological conditions. Engineering geologists also play a vital role in rehabilitation and reconstruction efforts in the aftermath of major disasters as highlighted by Katrina (August 2005) and the Pakistan Earthquake (October 2005). I am optimistic about the future of engineering geology, but we need to keep up with new technologies to enhance our capabilities for better forecasting of hazardous events and safe design of building and other structures.

On behalf of the management board, I extend you our best wishes for a productive year and urge you to contact me or other officers for any questions or suggestions.

Invite John E. Moylan to Talk at Your School or Organization

Mr. John E. Moylan is the 2007 Richard H. Jahns Distinguished Lecturer. The Association of Environmental and Engineering Geologists (AEG) and the Engineering Geology Division of the Geological Society of America (GSA) jointly established the Richard H. Jahns Distinguished Lectureship in 1988 to commemorate Jahns' distinguished career and to promote student awareness of engineering geology through a series of lectures offered at various locations around the country throughout the year. Mr. Moylan's diverse experience in engineering geology was profiled in the previous issue of The Engineering Geologist. Contact him at john_moylan@sbcglobal.net or call 913-262-1557.

Students Experience Food and Friendship at EGD Luncheon

On October 23, the EGD luncheon was held at the GSA Annual Meeting in Philadelphia. It offered members enjoying the many interesting and informative technical sessions a break to catch up with friends and acquaintances. The traditional passing of the Berkey gavel from the outgoing Chair to the incoming Chair, discussion of the State of the Division, and outlining EGD plans for the technical program at the 2007 GSA Annual Meeting in Denver were among the business items presented to those attending this affair. Lauren Seidman, the 2006 awardee of the Roy J. Shlemon Scholarship, was given a certificate to commemorate this honor. Ms. Seidman is pursuing her Master's degree at Baylor University.

She has undertaken research on new methods for locating unmapped seismogenic faults. Another student benefiting from the Shlemon scholarship program was Ngai Yuen Wong, a student at Massachusetts Institute of Technology. Mr. Wong received support to attend the GSA Annual Meeting.



Roy J. Shlemon flanked by Ngai Yuen Wong and Lauren Seidman.

Student members of EGD and advisors with students working on Masters or PhD degrees are reminded that the Engineering Geology Division offers scholarship awards each year. The Roy J. Shlemon Scholarship awards are made possible by a fund created through the generosity of Mr. Shlemon. The awards are intended to be given to graduate students with the best research proposals within the broad field of engineering geology. Two \$1000 scholarships will be awarded; one for Master's level and one for Doctoral level research. Additional awards may be made at the discretion of the Roy J. Shlemon Scholarship Awards Committee. Details and application forms are available on the EGD web page, <http://rock.geosociety.org/egd/index.html>. Submission for this year's awards must be postmarked on or before **March 15, 2007**.

EGD Members Requested to Make Nominations

A number of awards are given annually by the Engineering Geology Division. These include the E.B. Burwell, Jr. Award, the Meritorious Service Award, and the Distinguished Practice Award. Together with the Association of Environmental and Engineering Geologists, the EGD participates in naming the

Richard H. Jahns Distinguished Lecturer. More information on the qualifications and nominating process for these awards is found on the EGD web page at: <http://rock.geosociety.org/egd/index.html>. Simply click on "Awards" for this information including past awardees. EGD officers and Committees depend on members to advance individuals for these honors. The deadline for submitting a nomination for the E.B. Burwell, Jr. Award is **February 1, 2007**. The other awards have a deadline of **March 1, 2007**.

Engineering Geology Division Committees 2006-2007

GSA Annual Meeting Division Program:	Abdul Shakoor
GSA Section Meetings Division Coordinator:	David Rogers
E.B.Burwell, Jr. Award:	Bill Schultz, Chair Bridget Doyle Eric Zinn Norman Levine 2 more to be appointed
Richard H. Jahns Distinguished Lecturer	Syed Hasan Paul Santi Terry West (AEG) AEG rep
Roy J. Shlemon Scholarship Awards	Robert A. Larson, Chair Scott Burns Jerome V. DeGraff Betsy Mathieson Roy J. Shlemon
Division Awards Committee	Sue Cannon Syed Hasan, Chair Paul Santi Abdul Shakoor David Rogers
Nominating Committee	Sue Cannon, Chair Robert Fakundiny William Haneberg
GSA Joint Technical Program Committee	Paul Santi Abdul Shakoor

2007 Engineering Geology Division Management Board

From left to right: Past Chair, Susan Cannon; Syed Hasan, Chair; Paul Santi, Chair Elect; Abdul Shakoor, Secretary; and David Rogers, Member-at-Large.

EGD Management Board 2006-2007

CHAIR: Syed E. Hasan, University of Missouri, Department of Geosciences; (816) 235-2976; hasans@umkc.edu

CHAIR-ELECT: Paul Santi, Colorado School of Mines, Department of Geology and Geological Engineering; (303) 273-3108; psanti@mines.edu

SECRETARY: Abdul Shakoor, Kent State University, Department of Geology; (330) 672-2968; ashakoor@geology.kent.edu

MEMBER-AT-LARGE: J. David Rogers, University of Missouri – Rolla, Department of Geological Sciences and Engineering; (573) 341-9414; rogersda@umr.edu

PAST-CHAIR: Susan H. Cannon, U.S. Geological Survey, Denver; (303) 273-8604; cannon@usgs.gov

EGD WEBSITE: <http://rock.geosociety.org/egd/index.html>

Martin G. Culshaw Honored with 2006 E.B. Burwell, Jr. Award

Citation by Allen Hatheway

For the past 15 or so years, Martin G. Culshaw has been in responsible charge of engineering geological activities at the British Geological Survey. During this time he has witnessed and dealt with profound changes in the functional direction of his agency, as it has moved to more directly and more effectively serve the citizens of the United Kingdom. These changes were inevitable and there is much to be learned in North America about geology in government being oriented toward serving direct human needs. This Burwell Award takes special note of Professor Culshaw's artful summarization of *From Concept Towards Reality; Developing the Attributed 3D Geological Model of the Shallow Subsurface*, prepared as his statement for delivery of the 7th Glossop Lecture of The Geological Society (London).

Twenty years ago, Martin Culshaw turned his attention grandly toward the spatial definition of the engineering properties and characteristics of rock and soil masses, and, in particular, their three-dimensional characterization in the "shallow subsurface." This was at a time when computer-based information technology began to achieve the capacity of storing vast amounts of geologist-generated field data, as reduced to numerical parameters. This was a fortunate selection of emphasis for Martin, as digitization of existing numerical data and advances in computer-based graphics have now become so fruitful as to provide near-instant arrays of three-dimensional (3D) physical models portraying visual associations, as enhanced by the use of selected coloring schemes.

Clearly, this new association of computational tools has unlimited potential, but only to the degree that experienced engineering geologists are detecting, evaluating, assessing, and interpreting the feedstock of the computer manipulation that creates the highly useful graphic end product. And, without the presence of those same experienced engineering geologists, the end-product models are without special merit or value.

And so, Culshaw's paper is a definitive guide to the existing qualities and to the great potential of our new ability to produce graphic 3D data assemblages. This is an essential step for all of us, as the technologies are new and rapidly changing, but the nature and direction, for perhaps several decades, will hardly change significantly. Culshaw's message is that of a menu of tools and a catalog of the existing and incoming banks of data that can, and must, be "mined." The "ore" of this resource will enable geologists to meet the expanding threats, not only of natural hazards, but of the stresses on the land and the triggering of some geologic processes by our intensified urbanization.

Martin's gross end-product, we see, is *Predictive Ground Modeling* by which we can and must move forward from the *Conceptual Geologic Model* (largely the fruit of independent work by Peter Fookes in the U.K. and the late (1946-2006) Martin N. Sara of the U.S.A.) With these "real" geologic models, we learned to embrace from the 1980s to today's "on-demand" graphical-physical models that can be built "in a moment" from information science geologic data banks. Culshaw cloaks the translation of data-bank geologic parameters into 3D models by following the three key engineering

geologic elements set down by the late Sir John Knill (AEG Holdredge Awardee, 2003; *Core Values*) as: 1) *The Geological Model*; 2) *Geological Properties*; and 3) *Geological Processes*.

The Culshaw contribution becomes fundamentally most useful when viewed as a summarization, by methodology and example, of the geologic data sources now at hand and of the tribulations centering on their sustenance and integration. In other words, computer science has already, in a way, advanced beyond our capacities, as nations and agencies, to take full advantage of today's digital capacities for manipulation and presentation of actual ("real," as detected, observed, measured and recorded by geologists in the field.

Inherent to the value of Martin's presentation is his recognition of the special requirements for assessment of existing and incoming subsurface geological data so that its inherent nature will stand the rigors of the expected evolution of computer storage, retrieval and manipulation. Here he reminds us to take special recognition of the limitations of the "scale" at which our future 3D representations are to be made and of the special controls that are represented by the Digital Terrain Models (DTM) that will, of necessity, govern the practicality of our future 3D presentations.

There is an element of practical projection to the Culshaw treatment, as well. That is, he anticipates a continued need to assess the particular degree of variance of reported engineering properties of earth material units treated in the 3D representations. For these considerations, he sets the stage for needed research and also for formal standardization of property-input data.

After dealing with the ongoing problem of property variance, Culshaw rightfully moves into the matter of representation of time-dependent change in the character of ground to be subjected to 3D characterization modeling. This plays into a further area of indicated research and standardization of 3D methodology. That is, to employ the graphic models as an improvement in various aspects of hazards assessment and of their associated risks. Again, Culshaw injects the profound need to consider scale effects for individual sites.



Martin Culshaw holds E.B. Burwell Jr. Award and receives handshake from Citationist Allen Hatheway.

The overall Culshaw presentation is a carefully assembled assemblage of published examples identify key geologic situations demanding their own forms of attention, each to respect the natural and repeatable anomalies and heterogeneities of geologic character that must be understood in setting up not only our subsurface databases, but in specifying the boundary conditions of the models that will so easily be produced by computer manipulation of our databanks. These examples constitute at once both key parameters and caveats for their computer manipulation. Among the caveats, he particularly stresses the need to evaluate uncertainty.

In summary, Martin Culshaw has forged a comprehensive methodology for 21st century 3D geologic data modeling; a set of geologic considerations and circumstances essential to accurate applications of 3D modeling. These fundamental controls likely will not change and therefore will serve to guide us in this respect for this entire century.

Response by Martin G. Culshaw
British Geological Survey

I am surprised, delighted and honoured to be the recipient of the Edward Burwell, Jr. Award for 2006. I should like to thank the Award Committee and the Engineering Geology Division of the Geological Society of America for making the Award to me. I also particularly want to thank Allen Hatheway for his kind words in his citation.

I wrote the paper that enabled me to win the Award for a reason. Engineering geology in the United Kingdom is struggling to maintain a meaningful presence in our universities. There has been an increased emphasis over the last decade, or so, on 'excellent blue skies' research. This has made it more difficult to obtain funding for applied geoscience research, including in engineering geology. As a result, it has come to be believed that there are few engineering geological research needs to fulfil and that engineering geology is a purely practical activity that takes place only in the commercial world of building, construction and remediation. I believe that this view is misplaced and that engineering geology is embarking on an exciting new era in its development.

In 2003, I was invited to become the Geological Society of London's 7th Glossop Lecturer. This invitation placed on me a dual obligation: to present a keynote lecture and to publish, in the Quarterly Journal of Engineering Geology and Hydrogeology, a paper based upon the content of the lecture. Sometimes, lectures of this type can be seen to be a description of the lecturer's career achievements; in other words, such lectures can be rather backward looking. I did not want to do this; I wanted to look forwards. I found my inspiration in the work of two very eminent British engineering geologists, Professor Peter Fookes and the late Sir John Knill. Peter Fookes gave the 1st Glossop Lecture, published in 1997, in which he developed and formalised the idea of the conceptual engineering geological model. He developed this idea further in a subsequent keynote paper with Fred Baynes and John Hutchinson at Geo2000 in Melbourne, Australia. John Knill presented the 1st Hans Cloos Lecture at the 9th IAEG Congress in Durban in 2002. He attempted to identify engineering geology's

‘core values’ and described what engineering geology had achieved and what still needed to be done.

Another key influence on the paper was work carried out by a number of colleagues at the British Geological Survey (BGS), particularly Holger Kessler, Dave Bridge and Simon Price. In about 2001, they began 3D modelling of the shallow subsurface using software recently developed by Hans-Georg Sobisch (of INSIGHT Geological Software Systems GmbH). This software enabled the BGS to use its large-scale, 2D digital geological maps and its extensive borehole log database to produce 3D geological models of the central areas of the twin cities of Manchester and Salford. Whilst 3D geological modelling is common in the oil industry, the lack of appropriate, easy to use software and adequate data has restricted similar spatial modelling in the shallow subsurface. It soon became apparent that, not only would we be able to produce realistic 3D spatial models, but that we could attribute them with real geotechnical data which could then be statistically modelled to show potential variation at the city scale.

In addition, colleagues and I had completed a series of 2D digital maps showing geohazard susceptibility for six geohazards across the whole of Britain, at a scale of 1:50,000. These maps were derived using understanding of the geological processes that cause the hazards and digital datasets that enabled the modelling of hazard susceptibility. So, the models have the potential to be used to determine how hazard susceptibility will alter with changes in climate, particularly rainfall. I stress that these maps were based on process drivers, not previous hazard occurrence.

I realised that these two broad areas of applied research together provided the basis for what engineering geology should be about. So, I suggested that Peter Fookes’ conceptual models now could be taken towards reality in areas with adequate subsurface data and that the engineering geological model was more than a part of John Knill’s engineering geological core values but was at the heart of those values. In the new world of digital data and modelling, the engineering geological model is a significant part of what engineering geologists do.

Furthermore, that model has five dimensions to it: 3D interpretation of geological surfaces and the variability of geotechnical properties, the effect of geological processes in changing the 3D model over time (the fourth dimension) and the many uncertainties associated with the data and the modelling process (the fifth dimension). We have barely begun to apply the fourth and fifth dimensions to the developing three dimensional engineering geological models; also, the models being developed need exposing to the hard test of site investigation to determine their place in helping us to understand the ground for development and regeneration. So, there is plenty for the next few generations of engineering geologists to do!

Finally, as well as repeating my sincere thanks to the Engineering Geology Division for this prestigious award, I should like to acknowledge the contribution of my many colleagues at the BGS and elsewhere, who have played significant parts in the development of the work honoured by the GSA.

Terry West Receives the Distinguished Practice Award

Citation by Abdul Shakoor

It is a great pleasure for me to be the citationist for the 2006 EGD Distinguished Practice Award. The Distinguished Practice Award recognizes individuals who have made outstanding contributions to the technical and professional stature of engineering geology through consulting work, teaching, research, publication, and voluntary service. For more than forty years, Terry R. West, professor of engineering geology at Purdue University, has been busy doing exactly that. His contributions to all facets of the profession have been exemplary and truly reflective of the spirit of the award.

After earning a B.S. degree in geological engineering from Washington University in 1959, Terry began his professional career working as an engineering geologist and soil engineer for Reitz & Jens in St. Louis, MO. While working for Reitz & Jens, he obtained an M.A. degree in geology from Washington University in 1962. He then joined Purdue University as a full-time instructor. Along side his teaching duties, Terry continued his graduate studies at Purdue University, earning an MSCE in 1964 and a Ph.D. degree in engineering geology in 1966. Terry's strong background in both geology and civil engineering is evident from his publications and the consulting projects he has worked on.

After completing graduate studies at Purdue University, Terry returned to the consulting world as principal consulting engineering geologist with ATEC Associates, a position he held until 1981. Since 1981, he has worked as a private consultant on numerous projects in engineering and environmental geology, and written more than 300 consulting reports on subsurface investigations, dams, hydrogeology, environmental impact, blasting-related damage, and evaluation of construction materials. More than 500 undergraduate and graduate students have benefited from his consulting experience through classroom teaching.

Teaching and research have been very important parts of Terry's career. He began teaching at Purdue University in 1961 and has been offering a variety of courses pertinent to engineering geology and civil engineering. Sixteen Ph.D. and 56 M.S. students have completed their degrees under his direction. These graduates are currently working at various universities, research institutions, state and federal agencies, and consulting firms. Terry has also served the profession through his research activities by publishing 85 abstracts and nearly 80 research papers. He is also the author of a widely used text book entitled "Geology Applied to Engineering, published by Prentice Hall, Inc.

Terry has generously given his time to many professional societies including service as EGD Chair (2002), AEG Vice President/President Elect (2006), Indiana Academy of Sciences President (2002), Highway Geology Symposium National Steering Committee Chair (1979-83), Member, ASTM Committees C-9 (concrete and concrete aggregates) and D-18 (engineering properties of soil and

rock), and Member, Executive Committee, Indiana Society of Mining and Reclamation. In his leadership roles, he has worked hard to enhance the stature of engineering geology.

Terry is the recipient of the Highway Geology Symposium Medallion Award for meritorious service (1983), the Purdue University Department of Earth and Atmospheric Sciences Award for 40 years of teaching (2002), the Indiana Citizens Recognition Award for 40 years of teaching (2002), the "Sagamore of the Wabash" Award (2002), the highest award given by Indiana Governor for service to Indiana, and the Distinguished Practice Award by Indiana Professional Geologists (2003).

Ladies and gentlemen, as you can see, Terry never stops. However, his prodigious efforts toward the professional aspects of his career do not override his perpetual willingness to help, advise, and mentor his many students and colleagues. It is a great honor for me to present the Distinguished Practice Award to my own advisor, mentor, and friend, Dr. Terry R. West.

Response by Terry West

Thank you, Abdul, for those words of praise. It's very meaningful for me to hear them from you because of your many accomplishments both technically and in service to Engineering Geology. You are certainly one of the most accomplished of those Ph.D. students who worked under my direction over the past four decades. I'm like the father that views the successful careers of his children which in many cases, exceed those of his own. It is my great pleasure to receive this award from the Engineering Geology Division.



Terry West, Distinguished Practice Award recipient, holds plaque received from Citationist Abdul Shakoor.

I first heard about EGD as a graduate student at Washington University, St. Louis, MO, as a student of Arthur B. Cleaves who taught the engineering geology curriculum there. He talked of his co-horts, George Kiersch, Shailer Philbrick, Robert Legget and others. Art Cleaves was an active consultant in applied geology extending the knowledge obtained as chief geologist of the Pennsylvania Turnpike expansion. He was a paleontologist, structural geologist turned engineering geologist and used his partially written textbook in several courses. In a way I did a similar thing myself while preparing my textbook "Geology Applied to Engineering" and some of my students no doubt recall this ordeal from their courses with me. I also realized that soil mechanics plays an important role in applied geology and was fortunate to work for Henry Reitz the professor who taught the course at Washington U. and also ran a local consulting company. The engineering in engineering geology became important to me.

I realized that I could explain geologic details to other students when working in study groups as a junior and senior Undergraduate. This led to my appointment as a teaching assistant during my master's work at Washington University, followed by a faculty appointment at Purdue University while perusing my PhD in engineering geology through the School of Civil Engineering there. After obtaining an MS in Civil Engineering followed by the Ph.D., my teaching career was expanded as the engineering geology program grew in Civil Engineering and then eventually in the School of Science where the program was transferred.

Realizing the accomplishments of both Arthur Cleaves and Henry Reitz as consultants working outside the university I decided to try my hand at this activity and performed my first consulting job on completion of my Ph.D., in 1966, relative to a local groundwater supply project. In 1969 I took a job with ATEC Associates in Indianapolis, where they were expanding their work in applied geology related to geotechnical studies. I worked on a part time basis thereafter and eventually was listed as the chief, consulting engineering geologist. This continued until the early 1980s when I became involved with several sanitary landfill projects and went out on my own as a consultant. I have continued in that capacity as an individual consultant ever since.

Meanwhile in a parallel universe I pursued my university career at Purdue University where I worked with a growing number of graduate students. This list has now accumulated to a total of 75 students consisting of 17 Ph.D.s and 58 M.S students. This certainly is not a record as professors go, apparently Nathan Newmark from the University of Illinois had over 100 Ph.D. students.

I had a number of opportunities to step away from the University to do full time consulting as several graduates proposed this as a meaningful venture. A number of geotechnical engineers have found a way to consult on an extended basis through their own company and still maintain a full time faculty position, such as George Sowers did with Law Engineering. By contrast others fell prey to the demands on their time and had to give up

the University post. Henry Reitz my mentor in St. Louis had to resign from The Civil Department at Washington University and some famous consultants became heavily involved in consulting and were forced to choose that route over a university career. In some ways I think I was fortunate that a few projects did not make as they would have gotten too big to do on a part time basis.

So through the years I've been involved in hundreds of consulting projects on a variety of subjects and this activity continues today. An advantage that I've enjoyed through my university appointment is to have the opportunity to become involved in professional societies. I have served as President of the Indiana Academy of Science, Chair of the Engineering Geology Division of GSA and in two weeks will become the next President of AEG, the Association of Environmental and Engineering Geologists. With all of this in mind, I want to humbly thank the Engineering Geology Division for giving me this honor of the Distinguished Practice Award. I greatly appreciate this recognition by my own profession.

Engineering Geology Division Recognizes Contributions by Bill Haneberg and Scott Burns with Meritorious Service Award

Citation (for William Haneberg) by Robert Fakundiny

William C. Haneberg, of Haneberg Geo•Science in Seattle, Washington, is one of the dual awardees of the Meritorious Service Award from the Engineering Geology Division of the Geological Society of America for 2006. Bill, as he prefers to be called, has a history of accomplishments and service to his professional colleagues and students that places him at the top of the roster of great practicing engineering geologists and compelled the Awards Committee to honor him this year.

Bill has a distinguished background, starting with academic achievements of a Bachelor of Science degree in geology from Bowling Green State University in 1982, a Master of Science degree in geology with major concentration in structural geology from the University of Cincinnati in 1985, and a Doctorate in geology from the University of Cincinnati with a major concentration in geomechanics and minors in engineering geology and hydrogeology. He is a Certified Professional Geologist with the American Institute of Professional Geologists, Licensed Geologist, Engineering Geologist, and Hydrogeologist in Washington State, Licensed Geologist in Wisconsin, and Accredited *Mathematica* Consultant with Wolfram Research. He is a Fellow of the Geological Society of America, and a member of the Association of Engineering Geologists and the American Geophysical Union.

Along with his professional achievements Bill has been honored with the Presidential Citation of the Association of Engineering Geologists in 2004, Editor's Citation for Excellence in scientific refereeing from the journal *Water*

Resources Research of the American Geophysical Union in 2002, and the Certificate of Distinction from the New Mexico State Engineer in 1994.

Professional service started for Bill when he joined Manitou Exploration Company as a petroleum geologist from 1985-1986. After a decade of service with and rising through the ranks at the New Mexico Bureau of Mines and Mineral Resources from 1989-1999, he started his own company. While at the Bureau he also taught as an Adjunct at the Department of Earth and Environmental Sciences and the Department of Mineral & Environmental Engineering at the New Mexico Institute of Mining and Technology. In Washington State, he has served as an Adjunct Associate Professor at Portland State University. He was appointed a Visiting Scholar at Western Michigan University and undertook that honor last month.



Awardee Bill Haneberg holds Meritorious Service plaque and receives congratulatory handshake from Citationist Bob Fakundiny.

Bill's service to his colleagues includes Chair of the Engineering Geology Division and Chair of the Professional Development Committee of GSA. He has served on advisory committees and convened a half dozen scientific symposia and technical sessions at national scientific meetings. He has provided advice as a member of city, state, and national policy commissions and committees.

As a scholar he has been author, lead author, or co-author of four books, receiving the coveted Claire P. Holdredge Award for best book of the year from the Association of Engineering Geologists for 2006. His technical papers, abstracts, and articles number close to one hundred.

This sterling background of accomplishments and service would be adequate in itself to establish Bill as this year's awardee, yet all of his friends and colleagues would concur with me that his unhesitating, intelligent, and positive response to every request for advice or aid to all who ask sets him apart from the crowd and

adds to the luster of his body of work. Most importantly I cannot describe Bill better than to use two characteristics that I believe are the most important for a mentor, scholar, and colleague: Bill Haneberg is a gentleman and a professional.

For these reasons and many more that his colleagues and friends can recount, I am honored and privileged to present to Bill this plaque from the Engineering Geology Division this 24th day of October, 2006 in honor of meritorious service to the Geological Society of America and to the practice of engineering geology. Bill Haneberg has unselfishly served his profession and mentored students in the advanced practices of engineering geology, geomechanics, and hydrogeology for the betterment of society.”

Response by William C. Haneberg

Thank you, Bob, for that very flattering citation. I am grateful to the Engineering Geology Division and GSA for offering so many opportunities to serve the science and profession, and am honored to have been chosen as a recipient of the Meritorious Service Award. Organizing annual meeting sessions, contributing to *Reviews in Engineering Geology* volumes, sitting on the *Environmental & Engineering Geoscience* editorial board and various society committees, and having the privilege of serving on the Engineering Geology Division management board have all provided wonderful experiences. I am also fortunate to have worked in settings, first in public service and now in private practice, that have allowed time for professional activity.

A few years ago, when I was on the division management board, I spent some time thinking about benefits of division membership that we might advertise to attract new colleagues. I came to the conclusion that the tangible benefits were few. No baseball caps, coffee mugs, or discounts on rental cars. Even our newsletter, *The Engineering Geologist*, is freely available on-line to anyone with internet access. So what can a prospective member expect for his or her money? The most attractive benefit, at least to me, is opportunity. That few dollars buys the opportunity to organize EGD sponsored technical sessions tailored exactly to his or her professional interests and become acquainted with the top names in the field. It buys the opportunity to nominate colleagues for awards that recognize their contributions to engineering geology. It also offers the opportunity to help guide the profession into the future by becoming a participant instead of a spectator, and build long lasting professional relationships. And, lest anyone think I've been completely overcome by altruism, professional involvement is also good for business.

Out time this afternoon is limited, so I will wrap things up by saying I have truly enjoyed my involved with the Engineering Geology Division over the years. Thank you for this honor.

Citation (for Scott Burns) by Susan Cannon

Today I am honored to present the Meritorious Service Award to Scott Burns for his outstanding service to the Engineering Geology Division. For most of us, Scott needs no introduction. This might have something to do with his gregarious and enthusiastic nature that seems to put him in the middle of many activities.

In service to the EGD, Scott started through the Management Board cycle in 1994 as the Chair of the Burwell Award Committee. He continued through the Member at Large, Treasurer, Secretary, Chair, and Past-Chair positions up to the year 2000, and performed each of these tasks with gusto and aplomb. Scott has also contributed his zest and good cheer to numerous committees including the Roy J. Shlemon Scholarship Committee, the Student Paper Award Committee, and has been the University Liaison for a number of years. Scott has also proposed and chaired countless Technical Sessions and led field trips at both Annual and Section meetings.



Awardee Scott Burns and Citationist Sue Cannon hold Meritorious Service plaque.

However, I would like to suggest that Scott's service to the field of Engineering Geology, and thus to the Division, extends well beyond these activities. A very striking element in Scott's career is the tremendous impact that he has on developing the next generation of engineering geologists. His enthusiasm and passion for the field are well known, as is his willingness to share this passion. Scott is a frequent organizer of field trips and conference symposia, and seems to be constantly developing new courses, all in the name of engaging students in the study of topics as diverse and intriguing as landslide hazards, radon distributions, tree throw and pocket gophers as geomorphic and pedologic agents, Alpine soil development, and heavy metals and trace elements in soils, which, of course, are relevant to studies on the effect of soils on wine production.

I was particularly intrigued to learn about the “Kiss of Death” system for characterizing potential geologic hazards: Do you have smectites in your soil? kiss of death; expansive soils? kiss of death; quick clays? kiss of death, etc. What a visceral way to boil an issue down to its essence. One of Scott’s students perhaps said it best: “Scott is an intelligent, easy going, humorous, and sociable person who truly cares about the world, geology, science, education, his family, his students, and mankind - maybe not in that order, but all of the above.”

Please join me in presenting Scott with the Meritorious Service Award for his years of service to the EGD, and for his commitment to the next generations of engineering geologists.

Response by Scott Burns

I would like to say many thanks for this award because it means a lot to me. My involvement in this division over the past 20 years has been totally enjoyable and has been a great learning experience. We have accomplished a lot, but we still have a lot to do! Receiving this award gives me a chance to thank three groups of people at the same time.

First of all, I would like to thank the many mentors I have had in engineering geology. Many of them are here in the room today. Mentoring is so important to all young geologists for it allows those with many more experiences to pass on their ideas and experiences. So much of our work is based on case histories and past ways of dealing with different situations. I was the recipient of so much information over the years. To the many of you who have had such a great impact on my career, like Chris Mathewson, Roy Shlemon, Jeff Keaton, Terry West, Allen Hatheway, John Hawley, Dick Galster, Charles Welby, John Williams, Robert Sydnor, Bert Slemmons, Jim Slosson, Dick Proctor, and Perry Rahn and so many others, I say thank you!

Secondly, I would like to thank all of my colleagues. I totally enjoy interacting with so many of you in so many ways. I am continually learning from each and every one of you! If I need some input or an opinion, you are always there to help! So to those many friends who have been so helpful to me like Rob Larson, Jerry DeGraff, Sue Cannon, Bill Haneberg, Vince Cronin, Dave Rogers, Abdul Shakoor, Paul Santi, Briget Doyle, Judy Ehlen, Norm Levine, Bob Fakundiny, Dick Iverson, Jerry Higgins, Mike Hart, Syed Hasan, Skip Watts, Greg Ohlmacher, Betsy Mathieson, John Kiefer and so many others, I say thank you!

Finally, we are all in the business to help develop the next generation of engineering geologists! So, I would like give a special thanks to all of the students who make my life so interesting and challenging! I have had 25 graduate students who have finished their theses/dissertations under my guidance and many, many more who have taken classes from me at Western Washington University, Lincoln College in New Zealand, University of Colorado,

Louisiana Tech and Portland State University. I see all of you practicing out there, and you make me proud. I have three current students with me here today from Portland State University – they keep my life exciting all of the time. To the students past, present and future, I would like to say thank you.



EGD members and their guests enjoy good food and conversation at the luncheon held at the GSA Annual Meeting in Philadelphia. (Note: The Newsletter Editor reports that the chocolate mousse desserts seen on the tray adjacent to the front table were terrific!)