

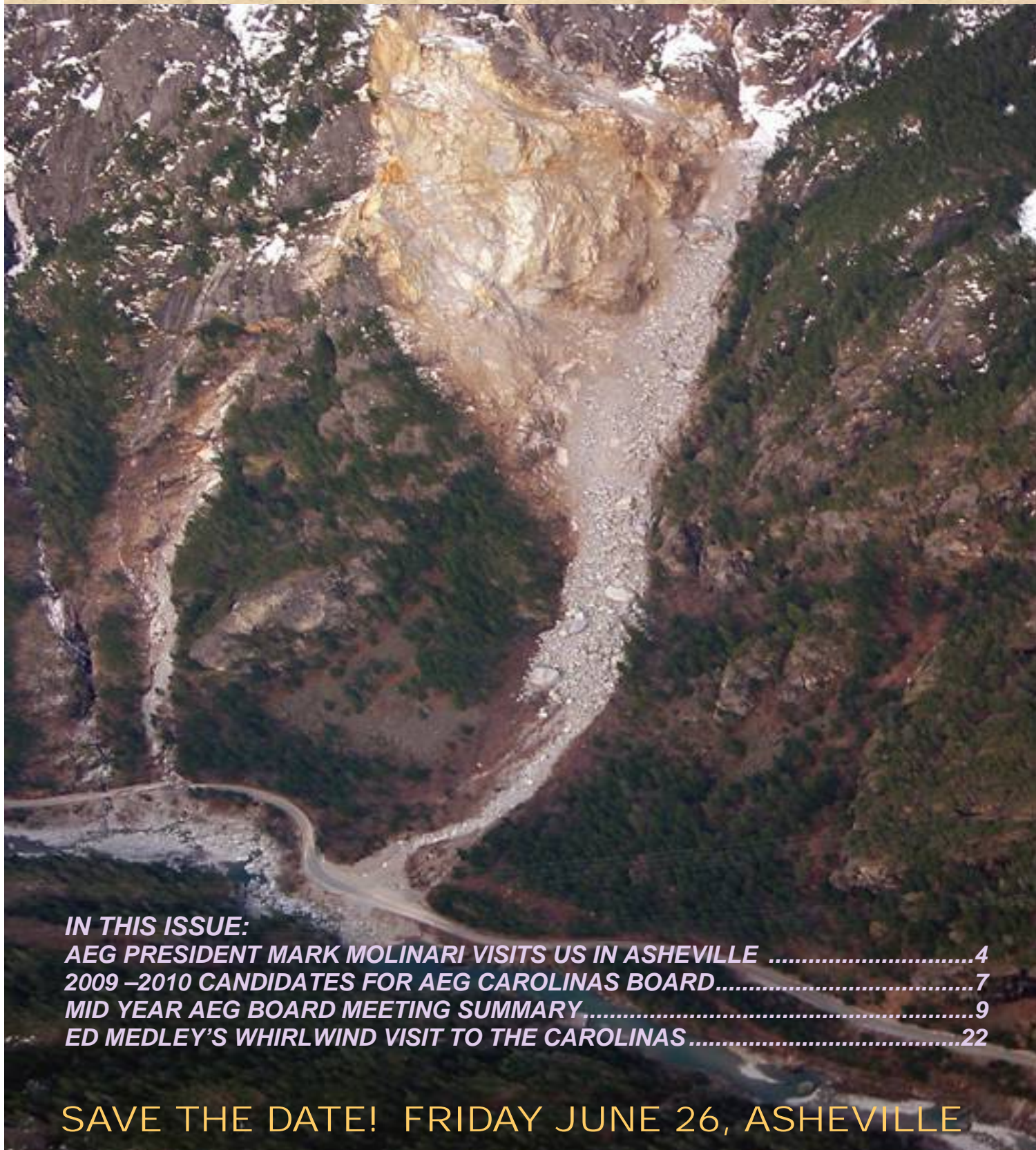


# GEO NEWS

Newsletter of the Association of Environmental & Engineering Geologists and  
American Institute of Professional Geologists, Carolinas Sections



**SUMMER 2009**



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**SAVE THE DATE! FRIDAY JUNE 26, ASHEVILLE**



**GEONEWS SUMMER 2009**

Issue Date: June 11, 2009

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**Cover Photo:** On November 9, 2003, a 1,000,000+ cubic yard rock avalanche traveled up to 2,000 feet downslope and closed Washington State Route 20, the North Cascades Highway, near Newhalem, Washington. State Route 20 is visible as the ribbon in the bottom of the photo.

Photo courtesy AEG President Mark Molinari.

**GeoNews** is a publication of the Carolinas Section of AEG. There are four issues per year, with deadlines and issue publication dates listed below. We publish news of the profession, technical articles, and job openings.

**Deadlines for submittal to GeoNews (can be flexible depending on events)**

Spring – deadline March 1, issue date March 21

**Summer – deadline June 1, issue date June 11, 2009**

Fall – deadline September 1, issue date September 21

Winter – deadline December 1, issue date December 21

**Deadlines for submittals for the National AEG News:**

March issue – January 21

June issue – April 30

September issue – July 31

December issue – October 31

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Treasurer ..... Dave Duncklee, [treasurer@aegcarolinas.org](mailto:treasurer@aegcarolinas.org)

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Membership Co-Chair ... Carin Kromm, [clkromm@mactec.com](mailto:clkromm@mactec.com)

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Advisor..... Gary Rogers, [advisor@aegcarolinas.org](mailto:advisor@aegcarolinas.org)

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Webmaster .....Tami Idol, [webmaster@aegcarolinas.org](mailto:webmaster@aegcarolinas.org)

**AEG National Website.....**

[www.aegweb.org](http://www.aegweb.org)

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**Former Editor (1989-2003) .....**

Phil Winchester, Jr.

(Phil Winchester Jr.—Dec 7 1933—May 5 2009. See page 13)



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**MESSAGE FROM THE CHAIR***By Rick Kolb, AEG Carolinas Section Chair*

Our next section meeting, on Friday, June 26, will be a break from the past in many ways. It will 1) be held in June, and most of us can't remember the last time we had a section meeting in the summer, 2) be held on a Friday night instead of our usual Thursday night, 3) be held in Asheville, where we've not had a meeting for years, 4) be a joint meeting with the local branch of ASCE, and 5) feature AEG President Mark Molinari. AEG Secretary and former section chair Jennifer Bauer, who works for the NCGS in Asheville, suggested that city as a location for a summer section meeting. Since we know Asheville is not a convenient day trip for many of our members, Jennifer suggested we try a meeting on Friday night, thinking that members could make it part of a weekend in Asheville.

Most of you know there is a lot to do in the Asheville area, and getting there for a Friday night would give you a full day Saturday to play. It so happens that the week following our meeting is the 43rd U.S. Rock Mechanics Association and 4th U.S. Canada Rock Mechanics Symposium, sponsored by the American Rock Mechanics Association in conjunction with the Canada Rock Mechanics Association. We have forwarded our meeting announcement to the ARMA to publicize our meeting to the symposium attendees, and we hope to see early-arriving attendees of that symposium at our section meeting. The ARMA flyer with more information is on page 29 of this newsletter.

Our meeting location is less expensive than usual, so our meeting cost will be reduced (\$20 for Members/Non-Members, and \$15 for Public Sector employees) and will include a beer/wine ticket as well. You may recall that last year we had planned to have former President Dorian Kuper as a speaker, but at the last minute a family emergency prevented her from attending. President Molinari promised to make up for it with his visit. He works for URS in Seattle on both environmental and engineering projects. See his abstract and bio on page 4 of this newsletter. Let's show Mark some Southern hospitality with a good turnout.

Jahns Lecturer Ed Medley completed his jaunt through the Carolinas in April, visiting five colleges before talking at our section meeting in Raleigh. I saw two of his talks, both of which were highly entertaining. Ed was very complimentary of the travel arrangements we made for him and the reception he had from students and AEG members. Those of us that had the privilege of transporting Ed between venues had a lot of fun. For a review of his visit, see the article on page 22 of this news-

letter. The next Jahns Lecturer will be announced at the annual meeting in Lake Tahoe, and we hope next year's lecturer will conduct similar visits to the colleges and universities in our section as well as a talk at a section meeting.

Your 2010 annual meeting committee has established the framework for the meeting in Charleston. We have finalized the flyer, page 5, and the official announcement, which is shown on pages 20 and 21 of this newsletter. We've identified the committee chairs and ask for our section members to volunteer to help. The committee met in Charleston last month to tour the U.S.S. Yorktown, where we will hold The Special Event. Charleston is a beautiful, unique American city, and we hope the 2010 annual meeting that will be long-remembered by AEG members across the U.S. But we need your help to do this. Please see the article about our recent committee meeting in Charleston on page 8 of this newsletter, and contact any of the committee chairs if you are interested in helping.

The 2009 annual meeting in Lake Tahoe is three months away. Though these tough economic times may make it difficult for some members to attend, I urge you to find a way to go to see what an annual meeting is like (which will help us plan our 2010 meeting), to learn from talks about our fields of work, and to meet some great people. The venue will be quite different from our meeting in 2010 (and we know of no plans for South Carolina to allow casino gambling), and of course the geography/geology will be quite different. The hotel rate for AEG's block is quite rea-

sonable, and the air fares are low due to the economic slowdown. You will find technical talks directly applicable to the work you are doing, since problems related to environmental and engineering geology don't respect geographic boundaries. Details of this meeting are on page 19 of this newsletter.

Our section continues to grow. As of May we had nearly 200 members, of which 80 are students. At the Mid-year Board Meeting in Seattle in April, AEG approved the applications to establish student chapters of AEG from the College of Charleston and the University of North Carolina at Charlotte. We welcome these chapters and their students to AEG, and expect/hope we will see them at our section meetings. In the fall we expect to see other applications from Appalachian State University, Guilford College, the University of North Carolina at Chapel Hill, and North Carolina State University.

As you know, our section has been an active participant in AEG's Visiting Professional (VP) program, in which our members visit colleges and universities in North and South Carolina and talk about our careers and opportunities for future graduates. We plan to visit each



(Continued from page 3)

college and university once a year, so we are always looking for volunteers to visit these schools. If you have any interest in meeting with students, let any of the board members know. We are always looking for volunteers. Maybe you could be a VP at your alma mater? Though we've yet to visit Western Carolina University, East Carolina University and Clemson, they are on the list of targets for 2009/10.

You might wonder how students at the College of Charleston could attend a section meeting. As you know, typically we've held meetings in Charlotte, Greensboro and Raleigh, all of which are a long way from Charleston. These venues will continue, but we expect to expand the number of section meetings each year. The meeting in Asheville is an example of this change. Whether we will hold section meetings each summer in Asheville depends to a great extent to the success of our June meeting. In

(Continued on page 7)

## AEG CAROLINAS JUNE 26, 2009 MEETING

**Program:** "The 2003 Washington State Route 20 Rock Avalanche – A Case Study from Emergency Response through Characterization, Design and Construction."

**Speaker:** Mark Molinari, President, AEG

**Place:** Asiana Grand Buffet- South, 1968 Hendersonville Road, Asheville, NC 28803

**Directions:**

From the East: Take I-40 to Exit 50A, Hwy 25 South/Hendersonville Rd. Travel about 4 miles south. Asiana will be on the left (east) side of the road.  
From the West: Take I-40 to Exit 50, Hwy 25 South/Hendersonville Rd. Travel about 4 miles south. Asiana will be on the left (east) side of the road.  
From the South: Take I-26 to Exit 37, Long Shoals Road. Turn right (east) and travel 1.8 miles. Turn left (north) onto Hwy 25/Hendersonville Road. Travel 0.4 miles north. Asiana will be on the right (east) side of the road.

**Date:** Friday, June 26, 2009

**Time:** 6pm social, 7pm dinner, 8pm speaker

**Cost:** Member/Non-member \$20 (includes one beer/wine ticket); Public Sector employees \$15  
Students: FREE with college ID

**Reservations:** Please make reservations by 5pm on June 24, 2009 with either:

**Ben Draper;** 336-852-4903

Benjamin\_draper@golder.com

**Jesse Jacobson:** 828-687-9080;

jjacobson@smeinc.com

**PDH's:** ASCE and the SC Board of Registration for Geologists will offer 1 PDH for attending this event

## ASCE AND AEG JOINTLY SPONSOR MARK MOLINARI TALK IN ASHEVILLE JUNE 26

The Carolinas Section of the Association of Environmental & Engineering Geologists and The Western Branch, North Carolina Section of the American Society of Civil Engineers are sponsoring a Special Joint Dinner/Meeting on Friday, June 26, from 6 to 9 pm. Guest speaker will be Mark Molinari, President, Association of Environmental & Engineering Geologists.

The title of his talk is "The 2003 Washington State Route 20 Rock Avalanche – A Case Study from Emergency Response through Characterization, Design and Construction." Location and directions are to the left in the blue box.



**ARMA Symposium** Can you stay a little longer in Asheville? Peter Smeallie, Executive Director of the American Rock Mechanics Association, has invited AEG and ASCE members to Asheville 2009: the 43rd U.S. Rock Mechanics Symposium and the 4th U.S.-Canada Rock Mechanics Symposium, sponsored by the American Rock Mechanics Association in conjunction with the Canadian Rock Mechanics Association. This symposium will be held the week following our joint meeting, from June 28 to July 1 at the Renaissance Hotel in Asheville. Details of this symposium are available at [www.armasymposium.org](http://www.armasymposium.org). Mr. Smeallie told us that AEG and ASCE members can attend the conference at the ARMA member rate. We expect/hope to see a few ARMA folks at our meeting on Friday night. Please show some Southern hospitality and welcome them to our meeting.

**Mark's resumé** Mark Molinari is a Principal Engineering Geologist at URS Corporation in Seattle, Washington with 25 years consulting experience assessing geologic and seismic hazards, and performing and managing environmental assessment and remediation projects. He has worked throughout the western U.S., including Alaska, and internationally. He has performed geologic and/or seismic hazard assessments for environmental impact studies, permit applications, and siting and design of on-shore and offshore petroleum facilities, power plants, LNG terminals, dams, linear utility corridors, public and commercial facilities, and municipal, and hazardous- and low-level-radioactive waste facilities. His environmental project experience includes due diligence environmental

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site assessments, hydrogeologic assessments, Remedial Investigation/Feasibility Study projects, and remedial actions for a wide range of oil and gas, aerospace, and commercial and industrial clients. In addition, he has a RI/FS project for a four-square-block Brownfield site for the University of Washington. Mr. Molinari has a B.A. from UC Santa Barbara and MS from University of Nevada-Reno, and is a Licensed Geologist, Hydrogeologist and Engineering Geologist in Washington; a California Professional Geologist and Certified Engineering Geologist, and a Nebraska Professional Geologist. He is the 2008-09 AEG President, and served two years on the AEG board as Washington Section chair and one year on the Governance Committee in addition to his three previous years on the Executive Council.

**Abstract** The 2003 Washington SR 20 Rock Avalanche – A Case Study from Emergency Response through Characterization, Design, and Construction.

On November 9, 2003, a 1,000,000+ cubic yard rock avalanche traveled up to 2,000 feet downslope and closed Washington State Route 20, the North Cascades Highway, near Newhalem, Washington. The primary failure occurred along an imbricate fault zone in Tertiary-age Skagit Gneiss in Afternoon Creek drainage, with secondary material traversing down an avalanche chute in Falls Creek drainage to the road. Immediate risk to the public in-

cluded additional rockfall, rock avalanches and debris flows. The area of slope failure was highly dilated along pre-existing discontinuities and intact rock fractures. This area was considered susceptible to continued rockfall and additional major rock avalanches. Lack of apparent water issuing from the rock avalanche debris in Afternoon Creek drainage after the slope failure led to concern about remobilization of the debris and blocking of the adjacent Skagit River during ongoing heavy rainfall, thereby potentially endangering downstream communities. Remaining debris entrained in the Falls Creek drainage was considered highly likely to mobilize onto the road because of the steep direct path to SR 20. Monitoring included aerial reconnaissance, conventional survey prisms monitored with a total station instrument, and three electronic instrument packages installed by the USGS. Data was telemetered from geophones, tiltmeters, extensometers, a water-level pressure transducer and a tipping bucket. A second rock avalanche on December 19, 2003 was successfully predicted using monitoring data.

Based on an assessment of risk, mitigation measures considered were removal of the hazard, slope reinforcement, and protection of the highway. Removal of the hazard was rejected because of the difficulty of working high on the slope, some 2,000 feet above the highway, and the risk of creating progressive failure that would further destabilize the mountainside above the current failure area

(Continued on page 6)

## AEG's 2010 Annual Meeting

September 20-25, 2010

Historic Francis Marion Hotel, Charleston, SC

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Photo Credit: Paul Fuxer, Photo Charlotte

For more information:  
303-830-6850 or  
meetings@aegweb.org

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and lead to a more severe hazard. Reinforcement was also rejected because of the block size, and construction access difficulties; therefore, protection of the roadway was the preferred mitigation measure. Six potential options were defined that were narrowed to three primary options based on cost. Option 1 was excavation of an embayment that provided a catchment area for reasonably foreseeable rockfall events that would likely have a direct impact onto SR 20. Option 2 was a rock shed that would allow any rockfall, rock avalanche, snow avalanche, or debris flow events to pass over the road and into the Skagit River channel. Option 3 involved moving SR 20 onto an embankment built in the Skagit channel, thereby creating a basin to contain any of the likely mass wasting events. Based on rockfall modeling, a geotechnical investigation and cost analysis, Option 1 was selected and successfully constructed.

**Directions** are on page 4 in the Blue Box. Be sure and call in your reservations early.



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## AEG CAROLINAS TREASURER'S REPORT

*By David Duncklee, Treasurer*

<b>Balance Carried over</b>	
Checking Account	\$3,989.77
Money Market Account	\$12,042.26
Charleston Planning Account	\$3,000.12

<b>INCOME</b>	
Dinner Meetings	\$885.00
Sponsorships	\$3,650.00
AEG Dues rebates	\$100.00
Defined donations	
AGI Toolkits	
Scholarships	
AEG Short Course Attendees	\$23,200.00
AEG Short Course Sponsors	\$2,350.00

**SUBTOTAL** \$30,185.00

<b>EXPENSES</b>	
Dinner Meetings	\$1,909.95
Mid Year Board Meeting	\$516.72
Educational Programs	
AGI Toolkits	\$0.00
Student Memberships	\$600.00
Student Travel Grants	\$0.00
NC Licensing Board AEG Continuing Ed Seminar	\$35.00
Visiting Professionals	\$337.20
AEG National	
AEG Short Course	\$24,631.86


**SUBTOTAL** \$28,030.73

<b>BALANCE</b>	
Checking Account	\$6,144.04
Money Market Account	\$12,084.65
Charleston Planning Account	\$3,000.79
<b>TOTAL</b>	<u>\$21,229.48</u>

*Respectfully Submitted,*

*David L. Duncklee*

**Treasurer, AEG Carolinas**

  <b>Environmental Conservation Laboratories</b>	<b>Cary, NC Lab:</b> <a href="mailto:ENCOCRY@encolabs.com">ENCOCRY@encolabs.com</a> Tel: 919-677-1669 Fax: 919-677-9846	<b>Orlando, FL Lab:</b> <a href="mailto:ENCOORL@encolabs.com">ENCOORL@encolabs.com</a> Tel: 407-826-5314 Fax: 407-850-6945
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our May section board meeting, we made the decision to hold at least one meeting a year in South Carolina, in addition to the three traditional locations (and possibly four, if we count Asheville). We have tentative plans to hold a meeting in Columbia in the fall in an effort to serve our members in South Carolina and attract students in that state to AEG. We also have plans for a field trip to the Duke University Groundwater Research Station in Orange County on October 10. The flyer is on page 30.

We welcome input from our members in South Carolina for ideas and venue locations for future meetings. We can alternate between Charleston, Columbia and Greenville/Spartanburg. What are your thoughts? Feel free to send your suggestions to anyone on the board. Email addresses for the board are on page 2 of this newsletter.

Cheers,

*Rick Kolb*

AEG Carolinas Section Chair  
RAKolb@MACTEC.com



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## CANDIDATES FOR 2009-2010 AEG CAROLINAS BOARD; BYLAWS CHANGES

Candidates for the 2009-2010 AEG Carolinas Board are presented below. If you are a member in good standing with our AEG section, you will receive your ballot in the mail. Other candidates may still be proposed by members; we are accepting nominations until the meeting in Asheville, June 26. Please send your nominations to Section Secretary Kristen Lloyd, at [KHLLOYD@mactec.com](mailto:KHLLOYD@mactec.com).



**Section Chair: Paul Weaver, L.G.,** Trigon | Kleinfelder. Paul Weaver is a Licensed Geologist in both North Carolina and South Carolina, and has been an AEG member for over seven years. He earned his geology degree from the University of North Carolina at Wilmington in 1981. Since graduation from college, he has worked as a hydrocarbon well analyst (mud logger) in the oilfields of Texas and Louisiana (both on-shore and off-shore), as the geologist for a limestone mining operation, as a subgrade chemical stabilization specialist with the NCDOT, and at various positions in various engineering consulting firms.

Paul is currently the Manager of the Transportation/Drilling department of Kleinfelder (formerly Trigon Engineering Consultants, Inc.) in Greensboro, North Carolina. In this position, he serves as Project Manager for all transportation projects within the Southeast Region of Kleinfelder, plus manages all of the drilling equipment (10 drill rigs of various sizes and capabilities) and three drill crews.

Paul's primary area of specialization is in geotechnical engineering, especially the performance of subsurface investigations for bridge foundations and roadways. Paul resides in Greensboro with his wife and 11-year old son. In his free time (of which there seems to be less and less), he enjoys wood working and performing in theatre. He has performed in numerous musical (acting, dancing, and singing) and non-musical theatrical productions over the last 30+ years including lead roles in several productions.

**Vice Chair: Brad Worley, L.G.,** NCDOT Geotechnical Engineering Unit. Brad graduated with a bachelor's degree in geology in 1995 from University of North Carolina at Wilmington. He then entered graduate school at UNC Wilmington, finishing in 2000 with a master's degree in



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geology. Brad's main emphasis during graduate school was metamorphic petrology/petrography and kinematics in metamorphic terrains. His master's research in the eastern Blue Ridge involved an in-depth and updated study of the deformational history of the Brevard Fault Zone, near the type locality of Brevard, N.C. In May of 2000, Brad began working for the NCDOT Geotechnical Unit, in the Raleigh Field Office, as a field geologist. In September of 2002, he moved to the Geotechnical Unit's Consultant Coordination Unit where he currently works as a Project Geological Engineer. In this role at NCDOT, he works with private geotechnical engineering firms and is involved in many complex geotechnical investigations state-wide. Brad is a licensed geologist in North Carolina. Brad resides in Pine Level, N.C., and spends most of his time away from work with his 12-year old daughter.

**Secretary: Kristen Lloyd.** Kristen is a staff geologist for MACTEC in Greensboro. She graduated in 2007 with a Masters degree in geology from NC State. She has worked as a TA for the geology labs at NC State and as a volunteer for the Tarheel Gem and Mineral Club annual gem and mineral show for the past 5 years. She has been an AEG member for 3 years, and is the current Secretary of the Carolinas Section of the AEG.



**Treasurer: Dave Dunklee, L.G.,** Dunklee & Dunham, PC. Dave is the president/senior hydrogeologist of the firm and has worked as an environmental consultant for 23 years. He has served the Ground Water Professionals of North Carolina as President, and has assisted on committees with the NGWA

and the ITRC. Dave is the current Treasurer of AEG Carolinas Section. See more about Dave in the About our Members article in the 2009 Spring edition of GeoNews.

We will also have revisions to the bylaws on the ballot. The changes update the existing bylaws dated 1986, so be sure and read the changes before voting.



Joyce Engineering, Inc. is a full-service consulting firm. We provide engineering & environmental solutions to private & public clients throughout the Southeastern United States.

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## 2010 ANNUAL MEETING PLANNING COMMITTEE IN CHARLESTON

By Jane Gill-Shaler and Rick Kolb

The weather was great; temperatures in the 70's, sunny skies with a few clouds and a brisk breeze as the delegation from AEG Carolinas Section and a couple of members from the Southeastern Section met at 2pm on May 16 in the Rita Liddy Hollings Science Center at the College of Charleston in the heart of this beautiful and historic city in Charleston Harbor in South Carolina.

The attendees were Briget Doyle and Norm Levine, AEG 2010 Meeting Co-Chairs and professors of geology at C of C; Rick Kolb from MACTEC, AEG Carolinas Chair and 2010 Finance and Special Event Chair; Paul Weaver of Trigon | Kleinfelder, AEG-C Vice Chair and 2010 Technical Session and Symposia Chair; Matt Howe, AEG Southeastern Section representative, and Matt's wife, Mary Katherine Howe; Jane Gill-Shaler, AEG-C Newsletter Editor, 2010 Sponsorship Co-Chair, and Guidebook Editor; Raymond Knox of Schnabel Engineering, Outstanding Environmental & Engineering Geologic Project Chair; Dave Dunklee of Dunklee & Dunham, AEG-C Treasurer, Sponsorship Co-Chair, and Short Course Chair; and Jim Hays of Environmental Conservation Laboratories, AEG-C sponsor and volunteer. We came from all over the Southeast, from the Carolinas and Georgia.

For two hours the group discussed their planned agenda items, including the Technical Sessions, costs of the trolley or water taxi for the Special Event, possible tour options, AEG Carolinas Website, the updated 2010 Meeting Brochure, options for the 2009 booth in Tahoe, budgets and sponsors.

We then carpoled out to the U.S.S. Yorktown, a WWII era aircraft carrier anchored on Charleston Harbor at the Patriots Point Naval and Maritime Museum in Mt. Pleasant, overlooking downtown Charleston. We were led by the catering manager, Christina Wood Jordan, through the open areas of the ship, from the huge carrier deck through all hangar decks and the Medal of Honor Museum, an integral part of this living museum. We discussed plans for the 2010 annual meeting Special Event, which will be held on the ship on Wednesday evening,

(Continued on page 9)



Yorktown group, left to right: Christina Wood Jordan, catering manager, U.S.S. Yorktown; Paul Weaver; Mary Katherine Howe; Matthew Howe; Raymond Knox; Briget Doyle; Rick Kolb.



(Continued from page 8)

September 22, 2010. The evening views of Charleston across the water and the living history that surrounds the ship promise to make our evening on the ship truly a Special Event.

If you would like to be part of this dynamic group, drop someone on this list an email. We can always use your ideas and energy!

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[tami.idol@ncdenr.gov](mailto:tami.idol@ncdenr.gov) and Jennifer Bauer,  
[jennbbauer@gmail.com](mailto:jennbbauer@gmail.com)

Field Trip Guidebook: Jane Gill-Shaler, [JaneHGill@aol.com](mailto:JaneHGill@aol.com)

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**Special Publication(s) Committee: Chair: needed**  
**Poster Sessions: Chair: needed**



Matthew and Mary Katherine Howe, Briget Doyle, and Raymond Knox enjoy the beautiful weather on the way to visit the U.S.S. Yorktown at Patriot's Point in Charleston.

## MID-YEAR AEG BOARD OF DIRECTORS MEETING SUMMARY

By Jennifer Bauer, NCGS

The Association of Environmental & Engineering Geologists (AEG) Directors convene meetings biannually to review the status and conduct the business of our organization. On April 17th and 18th, 2009, the Board of Directors (BOD) Mid-Year Board Meeting was in session in Seattle, Washington, the President's city of residence. Detailed meeting minutes were prepared and will be available for approval at the next Annual Board Meeting, which will take place in South Lake Tahoe, California, September 26-27, 2009. The following summary was prepared to assist our Directors in highlighting major issues and topic areas for communication to the general membership.

AEG has twenty-five (25) sections and five Executive Council members totaling thirty Directors. Nineteen (19) Section Chairpersons or their proxies were present along with the Executive Council (EC): President Molinari, Vice President/President-Elect Kreuger, Treasurer Hilton, Secretary Bauer, and Past-President Kuper, achieving the required majority present for a quorum. Chief Operating Officer Roland was also present, as were Governance Committee Chair Andrews, Finance Committee Chair Sofield, Strategic Planning Committee Chair Hale, Communications Committee Chair Shaw and other invited guests. Sections absent were Montreal, New England, New York-Philadelphia, Ohio River Valley, South-eastern, and Southern Nevada.

President Molinari discussed his Section visits, and told the Board that he would report back to them after discussing the Jahns Lecturer Selection with GSA.

Treasurer Hilton reported that the IRS accepted AEG's request to change the fiscal year from July-June to January-December, starting January 1st, 2009, which means AEG has to file a tax return for the short year of July-December 2008. The accountant-audited financials for the fiscal year 07-08 will be available at the end of April 2009 and our taxes are due May 15th. He also reported that our investments, down around 6%, are doing much better than the overall stock market, due to our conservative investment strategy which is consistent with prior BOD direction.

The 2008 Annual Meeting in New Orleans, LA had a surplus of around \$21,000.

Chief Operating Officer Roland reported that our Year-to-date membership total is 2632 members, which is around 85% of the total for 2008. Staff members at headquarters are in the process of calling lapsed members, but Section cooperation is imperative to bringing these members back to AEG.

Sections that have access to lists of State Licen-

(Continued on page 25)

## GEORAMBLINGS

By Dr. Charles W. Welby

For some time it has been my thought that two or three GeoRambling columns about the history of Geologist Registration in North Carolina might be appropriate as the history begins to fade in the memories of the participants in the event, and files become “recycled.” Neil Gilbert, of Zapata Engineering, presented a paper in the Symposium in Honor of Stephen G. Conrad, State Geologist, 1964 to 1990 at the 2008 SEGSA meeting in Charlotte, NC (Paper 11-5). (The paper was delivered by John Callahan at the Symposium in Neil’s absence due to his on-going treatment for Leukemia. John also contributed to the final form of the paper.) The paper traces the history of licensing of geologists in North Carolina. Neil has kindly provided his Power Point presentation to me as an aid in preparing the next several GeoRamblings columns and has kindly made helpful comments on the present column. I appreciate greatly his help and insight.

This first column goes back into some of the initial steps that led to the first attempt in the 1970s to create legislation for licensing of geologists. As you will learn, the first steps are intimately associated with the formation of the Carolinas Section of the American Institute of Professional Geologists (AIPG).

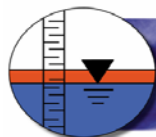
Perhaps, as a first step in the discussion it is ap-

propriate to review in a general way the purpose of licensing of any profession, as this purpose will enter into part of the later history of efforts to get appropriate legislation passed. That is, the essential purpose of licensing is to **protect the public, specifically in terms of protecting life, property, and health.** To accomplish this general purpose, the governmental unit responsible (States, in this case) requires a demonstration of the skills, ethics, and sense of responsibility on the part of the individual wishing to practice as a professional. In setting the standards, the governmental agency requires a demonstration of knowledge and the requisite skills to engage in the public practice of geology, demonstration of a suitable education for entry into the profession, and an appropriate level of experience. The State also requires documentation of a background of ethical conduct and assumption of responsibility.

Set within the framework of the understanding of what professional licensing by a State implies and demands, it was during the late 1960s and early 1970s that a number of geologists in North Carolina recognized a need existed for professional licensing for geologists. There were at that time people offering geological advice and services who were obviously not competent or did not have appropriate training. Much of this activity had to do with petroleum and mineral exploration. Also, as projects related to urbanization of parts of North Carolina pro-

(Continued on page 11)

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(Continued from page 10)

ceeded, there was an obvious need for more geologic input in a professional sense to protect the Public Welfare.

Responding to this recognition of the situation and the need for an organization devoted to matters related to the professional aspects of the practice of geology in the public arena, members of American Institute of Professional Geologists (AIPG) organized a meeting of geologists to discuss professionalism and the possible formation of a Carolinas Section of the AIPG. C. J. Leith, Charles H. Gardner, and Henry S. Brown organized a meeting of Geologists in North Carolina for March 16, 1974. Ten of the attendees at the meeting were members of AIPG, the minimum number of AIPG members required for formation of a state section.

The main speaker at the meeting was Adolf Honkala, immediate Past-President of AIPG from Richmond, Virginia. He discussed how AIPG functioned and how it had helped in other states for geologists to obtain legislative recognition of professional geologists. Dewey Kirsten from Virginia described the current activity in Virginia regarding geologists registration and AIPG's role there.

During the discussion period strong sentiment was expressed that an effort should be made for development of a Geologists Licensing effort in North Carolina. It was also decided that a Carolinas Section of AIPG should be formed to support professionalism concepts

among the geologists working in North Carolina. It was agreed that the nascent AIPG section should provide the leadership and impetus for getting appropriate legislation prepared and presented to the North Carolina legislature. With the unanimous support of the non-AIPG members at the meeting, Dr. Leith appointed a committee to organize an AIPG section. Members of the committee were Henry S. Brown, Chair; Charles H. Gardner; and J. Craig McKenzie.

The next meeting of the Carolinas AIPG members (Other interested parties were in attendance also) was held during the Carolina Geological Society Field Trip on the evening of October 5, 1974, at the Cheraw, SC, Country Club. Officers elected at the meeting were Charles H. Gardner, President; C.J. Leith, First Vice President; Norman K. Olson, Second Vice President; and Henry S. Brown, Secretary-Treasurer. Three Executive Committee members were also elected: Walter H. Wheeler, Orlando L. Rowland, and John M. Parker III. Charles Gardner informed the members that the National AIPG Executive Committee would meet in Denver on October 30, 1974, and would consider the request to form a Carolinas Section of AIPG then.

With the approval of the National AIPG for formation of the Carolinas Section of AIPG in October 1974, the first step in the development of a registration law for

(Continued on page 12)

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(Continued from page 11)

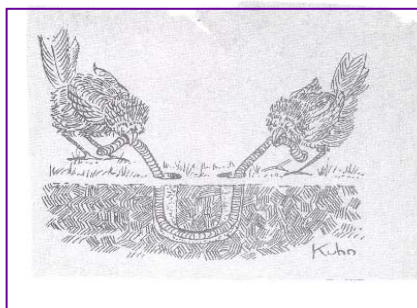
geologists began with a letter from Charles H. Gardner on March 25, 1975. In the letter Charles announced the appointment of Craig McKenzie as Chair of the AIPG Registration Law Committee under the auspices of the Carolinas Section of AIPG. He called for volunteers to help with the preparation of a Registration Law document.

(To Be Continued in the next GeoNews)

### Charles W. Welby

Dr. Charles W. Welby is a former Section Chair for AEG Carolinas and a regular contributor to this newsletter. He may be reached at [cww\\_ral@hotmail.com](mailto:cww_ral@hotmail.com).

P. S., Just in case you have one of those days that we experience in dealing with the legislative process over the next few years, the following cartoon may express some of those experiences or feelings.



*"There are just some things on some days that keep pulling in opposite directions!"*

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## ABOUT OUR MEMBERS: TAMI IDOL

My parents moved to Raleigh, NC when I was 1 year old, so I consider myself from NC. I had no idea I would wind up being a geologist, but looking back, it seems like the perfect match. I was always a tom boy.

I first started school at NCSU in aerospace engineering (following in the footsteps of the rest of my family), but quickly decided that was not for me. Playing in the mud was my passion, not doing strange math things with only letters that did not make sense. I graduated with a B.S. in geology from NCSU in December 1993 and went straight to work for the NCDOT Geotechnical Unit (as it used to be called). I spent 8 years at DOT before I decided to pursue engineering. With the required experience working under a PE, I qualified to take the Engineering Intern exam. Getting my EI and having a geotechnical background is what got me the job at NCDENR as the Assistant State Dam Safety Engineer. I love all of the different aspects of working on dams. Of course, when an application comes in that includes a geotechnical report, seepage analysis, flow nets, foundation design, etc. my geology background is still utilized. I would never get away from it completely.

Originally I joined AEG just to have it on my resume while looking for a job. Little did I know that I would wind up letting Gary Rogers talk me into becoming an officer. Although I no longer hold an "elected" position, I still act as the apprentice webmaster. Honestly, I have no idea what I am doing. The section has had a presence on the web since 2003. With AEG Carolinas Section hosting the 2010 Annual Meeting in Charleston, SC, a nice new website is under way. The domain will remain [www.aegcarolinas.org](http://www.aegcarolinas.org). The current website should be available right up until the new site is posted. The goal is to have the new site up and running before August 1, 2009.

I wish AEG Carolinas was as active when I was

(Continued on page 13)

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Phil Winchester Jr. is presented with a plaque from AEG Carolinas in honor of Phil's many years service with our Section. Former Section Chair Doug Canavello, of Pyramid Environmental, was the presenter. The occasion was the dinner in Asheville after our summer field trip, August 22, 2003.



(Continued from page 12)

in school as it is now. AEG has put forth a tremendous effort in reaching young people, both in college and school science classes. I still enjoy going to schools to teach kids about earth science. Kids love rocks!

*Tami Idol is a former Section Chair with AEG Carolinas, and currently our Webmaster. She is an Assistant State Dam Safety Engineer, and lives near Raleigh with her husband Joel and two very friendly dogs.*

## PASSAGES: PHIL WINCHESTER JR.

Phil Whitfield Winchester Jr., editor of AEG Carolinas GeoNews from 1988 through summer 2003, passed away Tuesday, May 5, 2009, at Forsyth Memorial Hospital in Winston-Salem. Phil was a hard working geologist who took time out of his busy schedule to produce GeoNews for our AEG section for over 15 years. His ready wit and kind disposition were always welcome at meetings.

Born December 7, 1933, he was the son of the late Dr. and Mrs. Phil W. Winchester Sr. of Morganton. He was also preceded in death by two sisters, Barbee Winchester Hairfield of Morganton and Grace Winchester Peacock of Raleigh. Survivors include eight nieces and nephews.

A graduate of Duke University, Mr. Winchester was a retired engineering geologist and Asheville area tennis coach. He also served in the U.S. Army during the Korean War. A longtime resident of Asheville and Fairview, Mr. Winchester had relocated to Mallard Ridge Assisted Living in Clemmons due to failing health.

To sign Mr. Winchester's online register book visit [www.moorefh.net](http://www.moorefh.net). Moore Funeral Home at Forest Lawn, Candler (828) 667-8717 is assisting the family.



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## EDUCATION SECTION

### AGI ANNOUNCES EARTH SCIENCE WEEK 2009 THEME

Contact: Geoff Camphire [gac@agiweb.org](mailto:gac@agiweb.org)

The American Geological Institute is announcing that "Understanding Climate" is the theme for the 2009 Earth Science Week. Climate is perhaps the most visible earth science topic in the news. Climate affects humans today just as it has for millions of years. It is also pivotal in understanding how the dynamics of our planet function across different scales of time and space.

Earth Science Week 2009 will engage students, educators, and the general public in understanding all the factors driving climate and the role climate plays in the history of Earth and humankind. "Students and the general public need to understand Earth's climate system, above and beyond the sound bites of public debate," says Ann E. Benbow, AGI's Director of Education and Outreach. "Earth Science Week 2009 will provide educators, students and interested citizens with the information, resources, and activities they need for scientifically sound climate education. "AGI coordinates Earth Science Week annually in cooperation with its sponsors and the geoscience community as a service to the public.

Each year, community groups, educators, and interested citizens organize celebratory events. Earth Science Week offers the public opportunities to discover the earth sciences and engage in responsible stewardship of the Earth. Earth Science Week is supported by the U.S. Geological Survey, the AAPG Foundation, and the broader geoscience community through grass roots activities. To learn more about this week and ways to become involved; including newsletters, local events, and classroom activities, please go to the Earth Science Week website at <http://www.earthsciweek.org>.

The American Geological Institute is a nonprofit federation of 45 geoscientific and professional associations that represents more than 120,000 geologists, geophysicists and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in the profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in society's use of resources, resiliency to natural hazards, and interaction with the environment.

(Education Section continued on page 16)

### NCGS ANNOUNCES LAUNCH OF WEB-BASED MAP VIEWER FOR WATAUGA COUNTY

The North Carolina Geological Survey announces the launch of its web-based map viewer for Watauga County. This viewer allows anyone with Internet access to see the NCGS mapped Landslide Features and Landslide Hazard Maps, with the capability of zooming in to a scale of 1:6,000. The landslide hazard maps show where landslides have happened, or are happening; where landslides like debris flows may start, and if they start, where they may go. Also viewable are aerial photographs, topographic maps, generalized geologic maps, parcels, roads, critical facility locations, and much more. The different map layers can be turned on and off so that you can see multiple layers at one time.

Go to [http://wfs.enr.state.nc.us/fist/fistMain.php?site=Watauga\\_Landslide\\_Mapviewer](http://wfs.enr.state.nc.us/fist/fistMain.php?site=Watauga_Landslide_Mapviewer) to check it out. These maps are a resource to increase awareness of landslide hazards, and to identify areas that may need a more site-specific evaluation of slope stability before land disturbance takes place. For more information about the maps, please contact NCGS Senior Geologist Rick Wooten at [Rick.Wooten@ncdenr.gov](mailto:Rick.Wooten@ncdenr.gov).

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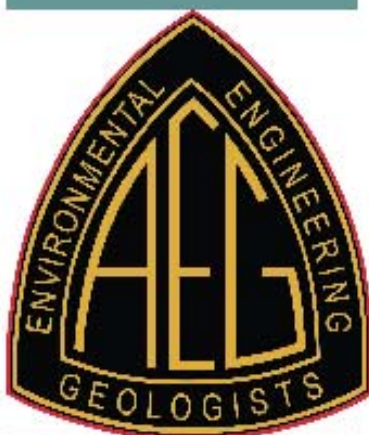
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## What is Environmental & Engineering Geology?

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Environmental & Engineering Geology is the application of geological science to engineering and construction of man made structures and facilities, and protection of environmental conditions and the public health, safety, and welfare.

Environmental & Engineering Geologists apply geologic data, techniques, and principles to the study, characterization and analysis of:

- naturally occurring rock and soil materials and surface and subsurface fluids
- geologic and hydrologic processes and their interaction with the natural and built environment
- geologic, seismic and hydrologic hazards that can impact human health and the built environment, and man-made impacts to soil, groundwater and surface water resources and mitigation and remediation of such impacts.



Environmental & Engineering Geologists utilize specialized geologic training and experience to provide quantitative geologic information and recommendations, as well as judgmental interpretations and recommendations.

## EDUCATION SECTION

### **Short Course in Soil and Groundwater Geochemistry**

AEG Carolinas Section organized a *Principles of Soil and Groundwater Geochemistry* Short Course in Research Triangle Park, North Carolina on May 4 and 5th, 2009. Mr. Bill Deutsch of Battelle Pacific Northwest National Laboratory presented information from his published book along with intriguing case studies from his varied experience on sites ranging from the Hanford site in Washington to a cobalt ground water plume in the Tidewater area of Virginia.

The topic began with an introduction to the geochemical system, chemical reactions, and field data collection. Gas phase reactions and the carbonate system, mineral dissolution/precipitation, and oxidation/reduction reactions were then discussed. Day two of the course consisted of adsorption/desorption reactions, followed by a discussion of fate and transport controlled by geochemical processes. The topics were all brought together by a classroom exercise at the end of the second day.

Food and drinks were provided throughout the

two days to all attendees. The weather on Monday was terrific and many attendees had lunch outside on a sunny deck. At least 30 or 40 attendees relaxed Monday evening at a social.

The course was well attended by the environmental consulting community as well as representatives from NC DENR. Attendees traveled from as far as Michigan, Alabama, and Delaware to attend. In total, 100 attendees and 7 sponsors contributed to the event. Thanks to Gary Rogers of Schnabel Engineering, Dave Duncklee of Duncklee & Dunham, and Rick Kolb of MACTEC for contributing much time, energy, and will to make this a most successful event.



### **AGI accepting applications for 2009 award for Excellence in Earth Science Teaching**

Alexandria, VA - The American Geological Institute (AGI) and the AGI Foundation are accepting applications for the Edward C. Roy, Jr. Award for Excellence in Earth Science Teaching. Given annually, this award

(Continued on page 17)

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(Continued from page 16)

recognizes one classroom teacher from kindergarten to eighth grade for his or her leadership and innovation in earth science education.

The winner will receive a \$2,500 prize and an additional grant of \$1,000 to attend the 2009 Geological Society of America annual meeting in Portland, Oregon. To be eligible for this year's competition, applications must be postmarked by May 31, 2009.

This award is named in honor of Dr. Edward C. Roy, Jr., who was an energetic and dedicated supporter of earth science education. Roy was also appointed Chair of the Texas Earth Science Task Force by the Commissioner of the Texas Education Agency. To learn more about competition requirements, application procedures, and deadlines, visit <http://www.agiweb.org/education/awards/ed-roy/>.

### Summer 2009 Review Courses for ASBOG Geology Licensing Exam

The Association of Environmental & Engineering Geologists (AEG) is pleased to announce the Summer, 2009 series of review courses for the ASBOG® geology licensing exam taught by REG REVIEW, Inc. AEG and REG REVIEW, Inc. have partnered to provide these courses since 1992. In the Summer of 2009, twelve one-day review courses will be offered in regionally through-

out the U.S., these twelve courses will be spread out into the following regions, the Pacific Northwest, the Southeast, the Central East Coast, the Northeast, the North Central, the Central Midwest, the Central West, as well as the regular Northern and Southern California locations. Specific locations are listed below.

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Course dates and locations are as follows:  
 (For more specific location information please go to our website at <http://regreview.com/> and click on courses.)

#### Eastern US Courses - Summer, 2009

- 2009SEUS-2 - Atlanta, GA, July 17, 2009, 8am to 4pm
- 2009SEUS-3 - Jacksonville, FL, July 18, 2009, 8am to 4pm
- 2009NEUS-2 - Philadelphia, PA, July 19, 2009, 8am to 4pm
- 2009CEUS-2 - Raleigh, NC, August 2, 2009, 8am to 4pm

#### Western US Courses - Summer, 2009

- 2009PNW-2 - Seattle, WA, July 22, 2009, 8am to 4pm
- 2009NC-2 - Oakland, CA, July 23, 2009, 8am to 4pm (ASBOG® Portion)
- July 24, 2009, 8am to 10:30am (California Supplemental Portion)
- 2009SC-2 - Santa Ana, CA, July 24, 2009, 6pm to 8:30pm (California Supplemental Portion)
- July 25, 2009, 8am to 4pm (ASBOG® Portion)

(Continued on page 28)



# Groundwater Hydrology

**One-Day Short Course**  
**June 2009**  
**Hampton, VA**  
**Columbia, MD**



In-Situ® Inc. is proud to sponsor a one-day course on groundwater hydrology and related applications. The course will be presented by Dr. Ted Way, a senior hydrologist and educator with over 40 years of experience. This short course is an excellent overview or refresher on groundwater hydrology fundamentals, hydrologic pump tests, and contamination and remediation techniques.

## Topics Include:

### Fundamentals of Groundwater Hydrology

- Hydrologic cycle
- Basic equations
- Reasons for pumping tests/slug tests
- Groundwater – Surface water interaction; surface water monitoring techniques
- Groundwater problems

### Hydrologic Tests

- Frequently asked questions about pumping tests
- Pumping test equations and design of pumping tests
- Instruments and data analysis

### Groundwater Contamination and Remediation Techniques

- Groundwater contamination sources
- Contaminant transport mechanisms
- Remediation techniques

### Professional Development and Continuing Education

This program is designed to qualify for 6.0 PDHs for Maryland and Virginia engineers and geologists. This course is registered with Colorado State University for 0.6 CEUs.

## About the Presenter -- Ted Way, Ph.D., P.E.

Dr. Ted Way is a senior hydrologist with over 40 years of experience. He has held specialist technical and advisory roles throughout the USA and Taiwan at various corporations. Dr. Way has authored numerous publications related to groundwater hydrology.

Dr. Way first lectured in 1981 at the University of Wyoming and has taught at the National Taiwan University and National Chiao Tung University. He has also taught courses for the Association of Ground Water Scientists and Engineers USA and the International Atomic Energy Agency of the United Nations. Dr. Way is a certified instructor for ASTM International in Phase I Environmental Site Assessment; Phase II Environmental Site Assessment; and Risk-Based Corrective Action Process.

## Locations

Crowne Plaza Hotel, Hampton, VA and Hilton Columbia, Columbia, MD

## 2 One-Day Courses

Hampton VA - Tuesday, June 23, 2009 8:30 AM - 4:15 PM  
 Columbia, MD - Wednesday, June 24, 2009 8:30 AM - 4:15 PM

## Cost (includes food and beverages)

### With CSU certificate

\$ 250.00 prior to June 12, 2009  
 \$ 275.00 after June 12, 2009

### No CSU certificate

\$ 200.00 prior to June 12, 2009  
 \$ 225.00 after June 12, 2009

## Cancellation Policy

72 hours advance notice for full refund

**To Register:** Please call 800-446-7488 ext. 1

CEUs provided by:  Colorado State University

Course sponsored by:  In-Situ Inc.

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## AEG•2009

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52<sup>nd</sup> Annual Meeting

Harrah's Hotel & Casino

Stateline, NV/South Lake Tahoe, CA ~ September 21 – 26, 2009

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#### Meeting Hotel

Located near crystal clear waters and majestic mountains, Harrah's Lake Tahoe is a AAA Four-Diamond Award winning, 18-story hotel that is as impressive as the lake itself. Harrah's features seven exceptional restaurants, a magnificent swimming pool, luxurious spa, and a first-rate casino. The beauty of the Sierra Nevada and this wonderful lake make Harrah's Lake Tahoe the destination of choice.

#### About Lake Tahoe

Located at 6,200 feet above sea level, magnificent Lake Tahoe is a paradise for lovers of the outdoors. Golf at championship courses, jet around the lake on a waverunner, bike and hike famous trails and do everything in between. Explore the complex and varied geology, as Lake Tahoe is a geologists' haven formed by faulting, volcanic, activity, and many glacial epochs.

#### Symposia

- Digital and Electronic Technology in Engineering Geology, Bill Haneberg
- New Uses of Geomorphology in Engineering Geology, Keith Kelson
- Earthquake Hazard of the Sierra Nevada Range, Craig dePolo, Thomas Sawyer & William Bryant
- Long Run-Out Landslides and Rock Avalanches, Mike Hart and Phil Shaller
- Naturally Occurring Hazardous Substances, Dave Bieber
- Groundwater Resources in California, Quality and Supply, John Woodling
- Geologic Considerations for Dams, Doug Boyer and Brian Greene
- Environmental/Engineering Geology in Mining Practice, Steve Testa
- California's Levees Remediation Program, Frank Glick and Steve Mahake

#### Field Trips

Wine and Geology of the Motherlode (9-21)  
 Geohazards of the Tahoe Basin and Carson Front of the Sierra (9-22)  
 Quaternary Geology of the Lake Tahoe Basin (9-22 and 9-26)  
 Galena Creek Bridge (9-26)  
 Martis Creek Dam (9-26)

#### Short Courses

Introduction to Rockfall Analysis & Mitigation  
 Field Geological Mapping Using GIS & Tablet PCs  
 Seismic Site Response Evaluations  
 3D Laser Scanning For Rock Engineering Design & Geo-Infrastructure Monitoring

#### Teachers' Workshop

The Teachers' Workshop "Lake Tahoe Rocks" will be held on Saturday, Sept. 26, 2009 from 8 am-5 pm. Cost is \$40. Participants will learn about the forces that formed Lake Tahoe, and the forces still at work today, in the context of the Nevada State Science standards, influenced by pedagogically supported engagement strategies. You will participate in a morning field trip, followed by an afternoon classroom session, which will include a sack lunch. 0.5 Nevada state recertification credits may be available.

#### Guest Tours

Around the Lake Tour, Lake Tahoe Boat Cruise, Virginia City/Carson City, Vikingsholm/Tallac Historic Sites

Special Event: Edgewood Tahoe Golf Course: Edgewood Tahoe features a stunning deck, facing directly out onto the waters of Lake Tahoe, and white sandy beaches of the lakeshore, making Edgewood Tahoe an ideal location for our reception. Perhaps the most spectacular advantage of Edgewood Tahoe's unique setting is the dramatic sunsets.

For more information and to register for the meeting visit: [www.aegweb.org](http://www.aegweb.org)

## Committee Chairs

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## AEG•2010

### Charleston, SC

Francis Marion Hotel  
September 20 – 25, 2010

AEG•2010 features short courses, field trips, technical sessions, symposia, and more!



### ◆ Meeting Hotel

The Francis Marion Hotel, located in the heart of historic Charleston, South Carolina, was the largest and grandest in the Carolinas when it opened in 1924. Named for General Francis Marion, the "Swamp Fox" of the American Revolution, the Francis Marion Hotel in Charleston re-opened in 1996 after a \$12 million National Trust award-winning restoration, and is once again Charleston's Grand Hotel.

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For more information visit:

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AEG 2010 Charleston



Appalachians to the Atlantic.....  
Landslides, Earthquakes, and Hurricanes, OH, MY!

## AEG•2010

ASSOCIATION OF ENVIRONMENTAL &  
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53<sup>rd</sup> ANNUAL MEETING

Charleston, SC  
Francis Marion Hotel  
September 20 – 25, 2010

For more information:

[www.aegevb.org](http://www.aegevb.org)



**\*\*Planning for the meeting is in progress. The currently planned Field Trips and Technical Program topics are preliminary.**

- Geologic education
- Professional registration

## AEG•2010

### About Charleston ....

With a rich 300 year history, Charleston today is America's most beautifully preserved architectural and historical treasure. The city's past is a testament to the spirit and tenacity of its citizens. Its appeal has been described as a "living museum." As Charleston native Elizabeth O'Neill Verner once said, "It is impossible for me to enter Charleston from any side, whether by land or by sea, and not feel that here the land is precious; here is a place worth keeping..." Visit [www.charlestoncvb.com](http://www.charlestoncvb.com) to check out all that the area has to offer.

### Join us for a week of education, networking, and fun in Charleston!

#### ♦ Field Trips

- ♦ *Appalachians to the Atlantic:* Overnight trip between the North Carolina mountains and Charleston. May include stops at a landslide in NC, pumped storage project in Western SC, seismically retrofitted dam site in Central SC, and other stops to be determined.
- ♦ *Savannah River Site Visit:* 1 day trip to nuclear plant to see environmental remediation and other plant technologies at work
- ♦ *Coastal Processes Trip:* 1 day trip to local barrier islands.
- ♦ *Charleston Earthquake Walking Tour:* 2-3 hours, may run several during meeting as both field trips and guest tours. Shows and discusses evidence of 1886 M7 Charleston Earthquake on structures in downtown Charleston.
- ♦ *Macroeffects of the 1886 Charleston Earthquake:* 1 day trip led by Pradeep Talwani, University of South Carolina. Will explore evidence and effects of 1886 Charleston earthquake and paleo-earthquakes throughout the Charleston Region, including structural damage, 1886 and paleo-liquefaction evidence, and other earthquake-induced features.

#### ♦ Technical Program

In conjunction with the meeting theme, the technical program (September 22, 23 & 24, 2010) will focus on:

##### Geologic Hazards

- Earthquakes, seismic hazards and their mitigation
- Paleoseismology and Faulting
- Landsliding and their mitigation
- Subsidence and fissuring due to withdrawal

##### Geologic Characterizations

- Rock mass Characterization, rock mechanics
- Soil Characterization, expansive soils, liquefaction

##### Construction Materials Investigations

##### Geologic Studies for Engineering Structures

- Dams
- Tunnels
- Levees
- Transportation
- Lifelines
- Forensic Studies of Failures

##### Environmental Hazards

- Contaminate geology and its remediation
- Mining reclamation
- Naturally occurring environmental hazards and their remediation

##### Environmental and Resource Protection

- Groundwater Resource Characterization, conjunctive use
- Coastal Geology
- Surficial Geology, watershed restoration, wetlands, sedimentation, erosion

##### Fluvial geomorphology

- Field investigations, mapping
- Geophysics

##### Computer applications, GIS

##### Geo-visualizations techniques

##### Professional Education and Practice

- History of Engineering Geology
- Future of Engineering Geology
- Business of EG practice
- Regulatory practice



#### ♦ Special Event

- ♦ WWII aircraft carrier YORKTOWN, all 888 feet of her, is the flagship of the fleet at Patriots Point Naval & Maritime Museum. Patriots Point features 25 aircraft ranging from the fighters and bombers of WWII up to a modern F-14 Tomcat. Talk about hands-on history! Sit in the cockpit of an F-9 COUGAR, the first model used by the fabled Navy Blue Angels. Plus, strap in and hold tight inside our Navy Flight Simulator. Then, head to the bridge of the carrier with its commanding view of Charleston Harbor and take the actual wheel of this massive, floating city of steel. Feel what life was like for the more than 3,000 sailors who lived, fought, and sometimes died in epic Pacific battles. See where Japanese Kamikazes slammed into YORKTOWN. Overnight, young boys became fighting men and fighting men, in moments of greatness, became national heroes. Their stories are told in the Congressional Medal of Honor Museum onboard YORKTOWN. Our special event will feature private tours of the USS Yorktown and dinner/entertainment on board the ship. Visit [www.patriotspoint.org](http://www.patriotspoint.org)

## JAHNS LECTURER DR. ED MEDLEY'S VISIT TO THE CAROLINAS SECTION

**College of Charleston, by Briget Doyle**

Ed Medley arrived in Charleston on Sunday evening, April 5th, and was met at the airport by Briget Doyle, chair of AEG's 2010 Annual Meeting. They then went to the campus of the College of Charleston, where Ed stayed in one of the historic homes on campus. After a brief walk around campus, Ed and Briget were joined for dinner on the water at Shem Creek by AEG Student Members Kyla Erich and Sara Hosenfeld-Pyles, and Sara's husband. Monday morning AEG student members Brooke Spivey and Chris Ginn joined Ed for breakfast before his talk.

After breakfast, Ed met with members of the Geology Department at the College of Charleston. Ed's talk on the "Sea Cliff Incident" was given later that morning to a group of over 70 students and faculty from the College of Charleston, and was very well received. The audience enjoyed Ed's enthusiasm and the exciting topic.



Audience participation with 3-D glasses at Appalachian State University.  
Photo by Jennifer Bauer, NCGS.

After the talk, Ed joined several members of the AEG – C of C Student Chapter for pizza and conversation. Ed's visit to Charleston ended with a drive to Orangeburg with Briget and Norm Levine, where they dropped off Ed with former section treasurer Raymond Knox and sent him on his way to Columbia and USC.

**University of South Carolina, by Raymond Knox**

Ed Medley arrived in Columbia via a transfer on the local AEG shuttle at Orangeburg, South Carolina,

courtesy of Briget and Norm. After a quick windshield tour of the University of South Carolina campus, Ed presented his talk titled "Of Elephants, Earthquakes, Caves and Hot Rock - Recent Geological Engineering Adventures" to a small but enthusiastic group of students and faculty. Thank you to Dr. Alicia Wilson and Dr. Venkat Lakshmi (Department Chair – Geological Sciences) for hosting the meeting space. The 3-D glasses were a real treat and added much to the visualization experience.

After dinner at Mr. Friendly's (maverick southern cuisine), Ed was treated to a tour of the Vista, Colum-

bia's growing cultural focus neighborhood (bars, restaur-

*(Continued on page 23)*



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(Continued from page 22)

rants, art galleries, etc.) along the river. Morning brought a walking tour of the State Capital grounds and a road trip across the Piedmont up to the Blue Ridge Mountains to Hendersonville, North Carolina for the next leg of the AEG shuttle. What a surprise to be greeted by late spring snow flurries. Ed was picked up by Jenn Bauer for the trip to Appalachian State University.

#### Appalachian State University, by Jenn Bauer

Ed Medley's visit to Boone started in Hendersonville, where Raymond delivered Ed to Jennifer Bauer on Tuesday, April 7th. Jennifer took Ed to the North Carolina Department of Environment and Natural Resources office in Swannanoa to meet staff of the North Carolina Geological Survey. Ed's curiosity and interest in words led us to looking up the origin of the word Swannanoa. Wikipedia shows the Cherokee name for the route from the mountains to the Cheraw country was Suwa'li-nunohi ("Suwali path"), before we headed out to lunch. While waiting for our meal, Ed had the Geological Survey looking through our slit cameras and trying to envision writing a description of the room based on the little information we

gathered. Ken Gillon and Rick Wooten accompanied Jennifer and Ed on the trip up to Boone, which became quite snowy along NC 105 before we dropped back down into town.

Once at Appalachian State University, Ed met Geology Professor Kate Sharer and prepared to give his talk. He gave his "Of Elephants" talk to 35 attendees. Everyone seemed to enjoy the talk and especially Ed's enthusiastic way of presenting it. After his talk, the group adjourned to the lobby for refreshments and more conversation for an hour or so. The evening ended at a Thai restaurant in downtown Boone with Kate, Ed, Jennifer, Rick and Ken discussing issues in the life of a geologist. Ed was then dropped off at his cozy home for the evening (the local Hampton Inn), and awaited Carin Kromm's arrival in the morning for the next leg of his jaunt.



Dr. Ed Medley enjoying NC mountain weather.

#### Guilford College, by Carin Kromm

The next morning, Ed was waiting, with a hot cup of tea in hand, in front of the Hampton Inn when Carin Kromm, section membership co-chair, his escort for the day, arrived. The hour and fifteen minute ride to Guilford College was full of stories of the night before. Ed was excited

about the previous night's snowfall and the pictures that

(Continued on page 24)



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**BUILD ON US**

(Continued from page 23)

Jennifer took of them. He was impressed by student participation at all three universities thus far. Ed enthused about our Section's attention to his schedule and personal needs. He felt that having a traveling companion made his trip a lot less stressful. Ed recently toured Arizona and New Mexico and also experienced a high level of Section planning and involvement. But such hospitality has not been uniform across the country – that of the Carolinas Section was superb. Well done, Carolinas Section!

The geology department chair of Guilford College, Dr. Angie Moore, and ten of her students selected Ed's "Of Elephants" talk. The lecture imparted Ed's opinion that students required an awareness of the different disciplines of geology in the working world. He also intended to recruit as many students as possible into his field of choice, engineering geology. He dazzled them with his projects tales and experiences of fame and fortune.

Gary Rogers invited Ed to his house for a home-cooked meal with his family. Upon arrival after dinner at the hotel in Greensboro, Ed was once again full of stories about the evening before. He was delighted with Gary's wife, a landscape designer, and his teenage daughter. He joined the family argument about whether Gary's daughter needed a cell phone. Who won?

#### UNC Chapel Hill, by Rick Kolb

Thursday morning, Carin picked up Ed at the hotel and drove him to Chapel Hill for his 11:00 AM presentation to geology students and faculty at the University of North Carolina. Carin met section chair Rick Kolb, who delivered Ed to the department for his talk while Carin parked the car. Drew Coleman, faculty advisor of the geology club, also had chosen the "Of Elephants" talk. However, Drew was out of town that day, so faculty member Lara Wagner hosted Ed, Carin and Rick for his talk, which Ed delivered to approximately 50 students and faculty. As we had found at the other schools, Ed's talk was highly entertaining and informative, and kept the viewers fully engaged. After his talk, Dr. Wagner took us on a short tour of the campus, after which she and other faculty hosted us and about a dozen geology students for lunch (and maybe a few beers) at Top of the Hill restaurant on Franklin Street. The stories continued, and our lunch allowed Ed to have one-on-one conversations with the students, who entertained Ed almost as well as he entertained us.

After lunch, Rick took Ed on a short tour of Duke University, then proceeded to Raleigh and the Carolina Ale House at Brier Creek. We arrived early enough to allow Ed to check his email and collect his thoughts before another round of students, followed by AEG members.

#### Section Meeting, by Rick Kolb

We began our meeting at 5:00 PM instead of the usual 6:00 PM to allow students to mingle with Ed before the meeting attendees arrived. We had worked with the

geology clubs of UNC Chapel Hill, UNC Charlotte and North Carolina State University, so our section arranged an early start for the meeting with Ed. We were rewarded with attendance by about 30 students from these schools as well as students and faculty from Duke University and Guilford College. At 6:00 AEG members and guests showed up and we ended up with around 75 in attendance. Thus, the first two hours of socializing were very lively. The students got to know each other and compared colleges and curricula, and were able to talk to Ed individually and in groups.

Once dinner was finished, Ed delivered his talk titled "The Least You Should Know About Characterizing Geological Chaos". His enthusiasm and liveliness never waned, even after giving his sixth talk in four days. After the meeting, Carin drove Ed back to the hotel in Greensboro, his trip to the Carolinas complete. However, the next day, section member Alex Rutledge drove Ed to Blacksburg for a talk at Virginia Tech before his return later that day to Oakland. We tried, but we just couldn't wear him out.

### THANKS FROM ED MEDLEY

Rick and Carin:

Thanks to you both for your chauffeuring in the last two days. I thoroughly enjoyed the your company and pampering. The Carolinas Section has set the standard for the rest of my Jahns Jaunt, and I suggest for future Lecturers. To be able to just turn up and perform is vastly more comfortable than having to organize everything!!

I was amazed at the number of students who turned up last night – you are a fully student-committed Section and I think the rest of AEG could follow your lead. I have attached some low resolution photos I took last night. Let me know if you need higher resolution originals.

I look forward to seeing you at AEG in So lake Tahoe this year, and certainly in Charleston next year.

Regards,

*Ed*

Dr. Edmund Medley, PE, CEG, F.ASCE  
Senior Consultant



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pricing to consistently deliver the highest quality environmental & industrial services. The company continually demonstrates its market leadership by offering service lines within every aspect of the environmental arena.

An acute attention to detail and an unwavering dedication to client's needs earned him a stellar reputation with his clients throughout the Southeast U.S., including many Fortune 500 companies. Eric McManus, President of A&D Environmental, states "John brings a wealth of experience and tremendous work ethic to our organization. He is a self-motivated individual whose expectations for performance mesh perfectly with our plans of future growth and regional expansion. We are delighted to have John join our management team."

For more information about A&D Environmental Services, Inc., go to their website at [www.adenviro.com](http://www.adenviro.com). A&D Environmental is an AEG Carolinas Silver Sponsor.

### **AE Drilling Services**

AE has recently completed a core drilling & packer testing project on the Tennessee River in Knoxville for a utility tunnel.

### **American Institute of Professional Geologists (AIPG)**

Abstracts are still needed for the AIPG 2009 Geology and Resources Conference, "Rocky Mountains and the Colorado Plateau - Canyons, Resources & Hazards." This is the AIPG 46th Annual Meeting, Grand Junction, Colorado - October 3-7, 2009. Please note that the ABSTRACT DEADLINE HAS BEEN EXTENDED TO June 15, 2009. For more information, please go to: <http://www.aipg.org/2009/2009%20CFA%20and%20AbstractForm.pdf>.

### **Mid Year Board Meeting** (Continued from page 9)

sees are asked to send these lists to Headquarters for membership solicitation.

Communications Committee Chair Allen Shaw discussed the print media of AEG. He asked that Sections ask their members to submit technical papers or case studies to the Environmental & Engineering Geoscience Journal. There will be several papers in a future issue of the journal by speakers at the Shlemon Specialty Conference on Fault Rupture that was held in Southern California in February 2009, and there is also the potential for a Special Publication from the conference proceedings and papers. Allen would like to increase advertising in the AEG NEWS in order to add more color photos and enhance the quality of the publication.

Website Committee member Dale Andrews reported on ideas about the website revision. He emphasized the need for the website to be a living document and for the Board to consider how it will be continually updated after revision.

In addition to presenting Finance Committee report, the Finance Committee Chair, Darrell Sofield, reminded the Board of its fiscal responsibilities and how the committee helps to meet those responsibilities. He then stated that without a Treasurer's report or a fiscal report that compares the actual financials to the budget, the FC could not do its job. "With out those reports, you can't tell if the budget was met," Darrell said. The FC suggested that the BOD develop a policy on procedures for financial reporting including procedures for comparing the budget to the actual money spent and a discussion section for items where considerable difference was noted between the budget and actual money spent. The EC has already begun implementing the FC's suggestions in the 2009 budget, as the budget and actual financials will be broken into quarters for easier comparison, and dissemination to the FC and BOD.

Sofield also made a request to members of the current BOD to join the committee. After waiving the 30-day notice, the Board approved by blind vote Mary Kay Markunas and Niall Henshaw as Finance Committee members.

2009 Annual Meeting Co-chair Gary Luce re-

(Continued on page 26)



**Mark Lassiter, P.G.**  
President

Two United Way  
Greenville, South Carolina 29607  
Phone: (864) 288-1986  
Fax: (864) 288-2272  
E-mail: [mlassiter@aedrilling.com](mailto:mlassiter@aedrilling.com)

(Continued from page 25)

ported that planning for the Annual Meeting in South Lake Tahoe is going well. COO Roland will distribute the PowerPoint presentation to Section Chairs for promotion at Section meetings. President Molinari will send the Board information on the Outstanding Environmental and Engineering Geology Award after the selection committee makes a decision.

Strategic Planning Committee (SPC) Chair Paul Hale gave an update on some of his sub-committees.

Advocacy Committee has been working on gathering information on the photos they received from the photo contest they hosted, is developing one page technical information flyers, and is considering making a short movie promoting the profession.

Student/Young Professional Support Committee has been busy with the Visiting Professionals Program, Section Champions/Student Liaison coordination, the Facebook page (New Geologist), the Student Chapter application template, a Student Welcome Packet, and planning a pre-Ice Breaker event at the Annual Meeting to connect students and professionals.

Section/Chapter Support Committee is finalizing an Officers' Handbook for Section Officers and conducting a survey of Section Chairs to find out where they need help.

The SPC contracted with Creativity @ Work to conduct a member survey and internal and external interviews. The results were used to direct the Strategic Planning workshop, which was held April 17th in Seattle, the Friday before the Board meeting. During the workshop, the attendees defined the areas of concern regarding the future of AEG. Now the SPC will work on a new Strategic Plan and will present it at the 2009 Annual Board Meeting.

During lunch each Section was asked to answer three questions: 1) What is working for your Section? 2) How is the economy affecting the Section and its members? and 3) What committee(s) are you on or would you like to be on? Answers will be posted with the minutes of the meeting (*Ed-They will be posted on the national website, aegweb.org*).

The Board discussed the Joint Task Force on Areas of Practice (JTFAP) Guidance document during the

MYBM. There was considerable concern that the document in its current condition does not effectively represent our professional practice and its intended use and purpose remains unclear. Although a vote was not called for, an informal blind straw poll was conducted asking if the document should: 1) stop, 2) proceed with the input and guidance of AEG on a broader basis, or 3) proceed as a publication solely published by AEG. Two abstained, 20 thought AEG should proceed on a broader basis, and 1 thought we should proceed with a publication published solely by AEG.

President Molinari requested creating an ad hoc committee. The BOD concurred, stipulating the following committee make-up guidelines:


- Minimum of 3 members from Western US, minimum of 2 members from Mid-west/Eastern US, plus two current JTF committee members
- Minimum of 5 members are current or former board members
- Strive to include at least one member of AEG Licensure Committee
- Strive to include at least one member who has been or is included on State Licensure Board
- Range of 7-10 members

The Ad-hoc Committee's charge will be to:

- Review and summarize member comments about the document
- Consult with Mark Molinari after he obtains feedback from AIPG and Geo-Institute (after June 15 deadline) regarding how they intend to proceed and invite to forum if appropriate
- Make recommendations for action and direction of the document
- Present recommendations to the membership one month before the Annual Meeting
- Have a discussion forum at the 2009 Annual Meeting assuming the document goes forward with the other groups
- Work with CA, OR, WA and other licensure boards


The Spring Shlemon Conference was a great success and had an approximate surplus of \$12,000. The selection committee is looking for proposals for future

(Continued on page 27)



**ROBERT "BUTCH" STEVENS**  
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(Continued from page 26)

conferences, beginning next year.

President Molinari discussed the progress of the future Annual Meetings.

- 2010 – Charleston, SC
- 2011 – Anchorage, AL - AEG will need to help with the planning of this meeting
- 2012 – Salt Lake City, UT
- 2013 – Seattle, WA

The Board decided it would like to post each AEG NEWS issue online when it is mailed and to allow public access for current and past issues.

Governance Committee (GC) Chair Dale Andrews reviewed the GC's summary of observations from the 2008 Annual Board Meeting. He also presented three Conflict of Interest templates for the board to decide among, in order to comply with IRS requirements. The board decided to have an attorney review all three statements and work with the GC and EC to finalize a version for Board approval at the 2009 Annual Board Meeting.

Andrews also presented a template for Sections to use for meeting announcements, which will be posted under the Section/Chapter Support documents on the website.

The GC compared the governance structure of AEG with other similar organizations and presented potential options for AEG. The Board discussed AEG's current governance structure and decided that it is effective, but feels that the GC should look into other options including the proposed options of Delegates and Regionalization as well as define performance measures and ways to measure efficiency and effectiveness of the governance of the Association in its current structure.

Treasurer Hilton presented the Fiscal Year 2009 budget, which covers from January-December 2009, to the board, emphasizing the major changes from the FY08/09 budget. Items such as reduced printing in the coming year, increased advertising/sponsorship efforts, and membership drives are essential to achieve/exceed this budget and allow the use of discretionary funds. The Board approved the budget as presented.

The Board discussed the pros and cons of online vs. print publications. Through straw vote, the Board's order of priority for electronic publication is 1) E&EG

Journal (21 votes); 2) AEG News (14 votes); 3) Directory (5 votes); and 4) Abstracts with Programs (0 votes). Members will be asked for their priority in a demographics survey that will be included with their membership renewals.

The Board discussed ways to retain and recruit members; each Director/Section Chair pledged to recruit a certain number of members by the 2009 Annual Meeting. Look for our goal to be posted and progress to be tracked as part of the membership drive. (*Ed-Section Chair Rick Kolb pledged to add 15 new members to the Carolinas Section.*)

Director Metz offered a free frequent flyer ticket to any member who recruited the most members before the 2009 Annual Meeting.

The Board approved changes to certain By-laws to account for the change in fiscal year to a calendar year.

The Board approved a template for a Memorandum of Understanding between AEG and Sections proposing to host a future Annual Meeting.

Two Student Chapters were approved by the Board: The College of Charleston and the University of North Carolina at Charlotte.

The Board approved by blind vote a nominee to be included on the Executive Council ballot as Secretary for 2009/2010. This nomination is not a final result, but places this candidate on the mailed ballot; the election results will be presented at the AEG Business Luncheon in Tahoe in September.

COO Roland summarized the report that the AEG Foundation (AEGF) submitted. The AEGF would like to work closely with the EC to establish one committee for the Lemke and Corporate Sponsor scholarships for students at the Annual Meeting. It would like to look at ways to support un- or underemployed members. It is supporting color photos in the E&EG, but would like for AEG to find a way for this to be self-sustaining.

PowerPoint slides on the AEGF are available for Section Chairs to have at their Section meetings.

President Molinari discussed AEG submitting a proposal to IAEG at the 2010 meeting to host the 2014 meeting, and reminded the Board that this meeting would replace AEG's Annual Meeting that year, and would be an IAEG meeting, not a joint meeting.

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(Continued from page 17)

- 2009SWUS-1 - Phoenix, AZ, July 26, 2009, 8am to 4pm

#### Central US Courses - Summer, 2009

- 2009CUS-2 - Nashville, TN, August 1, 2009, 8am to 4pm
- 2009NCUS-1 - Minneapolis, MN, August 6, 2009, 8am to 4pm
- 2009NCUS-2 - Chicago, IL, August 7, 2009, 8am to 4pm
- 2009SCUS-2 - Austin, TX, August 8, 2009, 8am to 4pm
- 2009CWUS-1 - Denver, CO, August 9, 2009, 8am to 4pm

California Courses are \$535 for AEG members, \$550 for nonmembers. ASBOG® Courses are \$445 for AEG members, \$460 for nonmembers. Preregistration deadlines for the Summer, 2009 courses are a postmark date of June 26, 2009 for all Eastern US courses, July 3, 2009 for the Western US courses, and July 16, 2009 for the Central US courses.

Included in the course price are the set of Study Manuals pertinent to the exams you are taking and a packet of course notes that we have developed to present material that is new to the exams. The course notes are only available to our students.

REG Review, Inc. has been teaching these courses in California since 1985. In March 2000, we began to direct our teaching towards the ASBOG® geology licensing exam. The pass rate for students in classes since 2000 has ranged from 85 to 99%. The courses are taught by Patti Sutch, California PG 3949, CEG1641, and CHG 25, Lisa Dirth, California PG 3951, CEG 1240, and North Carolina RG by ASBOG exam, and Elisabeth Ervin-Blankenheim, Pennsylvania PG and past student of REG REVIEW.

Current information on study manuals, flash cards, and courses, including specific locations, may be found online on REG REVIEW, Inc's website at <http://regreview.com>. To contact REG REVIEW Inc.: e-mail - [regreview@aol.com](mailto:regreview@aol.com), mailing address - 178 Bowles Rd, Newbury, NH 03255, telephone - East Coast call Lisa Dirth at 603-763-3272, (fax) 603-763-3341. West Coast (evenings) Patti Sutch at 916-456-4870.

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## Asheville 2009

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6. Five short courses by D.V. Griffiths, Maurice Dusseault, Fred Kulhawy, Ahmed Abou-Sayed and P.H.S.W. Kulatilake
7. Induction of new ARMA Fellows and presentation of ARMA Awards
8. Three great field trips: Blue Ridge Parkway, Gorges State Park, and Chattooga River Raft Trip
9. Thirteen Exhibitors and special commercial sessions
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The American Rock Mechanics Association; [smeallie@armarocks.org](mailto:smeallie@armarocks.org); [www.armarocks.org](http://www.armarocks.org)



*Carolinas Section of the  
Association of Environmental & Engineering Geologists  
Announces*

**Geology Field Trip**  
**Duke Forest Groundwater Research Station**  
**Orange County, North Carolina**  
**Led by Phil Bradley, Lori Skidmore, and Rick Bolich**  
**10:00 AM, Saturday, October 10, 2009**

We invite you to get outside to celebrate the end of summer by attending a field trip of the Duke Forest Groundwater Research Station in Orange County, North Carolina. Phil Bradley of the North Carolina Geological Survey (NCGS), Lori Skidmore, and Rick Bolich of North Carolina Department of Natural Resources' (NCDENR) Division of Water Quality's (DWQ) Resource Evaluation Program (REP) will lead the trip. The field trip will consist of a 2 to 3 mile hike through the DWQ - Aquifer Protection Section's (APS) - REP at the Duke Forest Groundwater Research Station site in Orange County. The Duke Forest Groundwater Research Station was installed to study the groundwater quality and hydrogeologic characteristics of metavolcanic and metaplutonic rocks within the Virgilina Sequence of the Carolina terrane with particular interest to the naturally occurring groundwater contaminants of arsenic, radium, and radon. Detailed geologic data conducted as part of the NC Geological Survey STATEMAP funded mapping program was used to sight the groundwater well clusters and is being used to help interpret hydrogeological and hydrogeochemical data from the site.

The field trip will include an overview of the REP program, a synopsis of regional and site specific geology with a discussion of the specific rock types and groundwater analytical results from each well cluster. Several rock outcrops will be visited during the field trip and rock hand samples and core samples from the site wells will be available for view.

**Field trip details:**

**Place:** Duke Forest Groundwater Research Station, Orange County, North Carolina  
**Date:** Saturday, October 10, 2009  
**Time:** 10:00 AM to approximately 4:00 PM  
**Program:** Duke Forest Groundwater Research Station  
**Cost:** \$15 (the cost of the guide book & Lunch)  
**Bring:** Water, sturdy shoes or hiking boots  
**Reservations:** Please email Benjamin Draper at [bdraper@golder.com](mailto:bdraper@golder.com) to reserve your spot. Please mail a check for \$15 to Benjamin Draper for receipt by Monday, October 5 so we know how many guide books to order.

*Association of Environmental & Engineering Geologists - Carolinas Section  
Field Trip to Duke Forest Groundwater Research Station  
Saturday, October 10, 2009*

Please complete this registration form and field trip waiver. Send both, with a check for \$15 made out to AEG, to Benjamin Draper by Monday, October 5, 2009.

Name: \_\_\_\_\_

Organization/Company: \_\_\_\_\_

Address: \_\_\_\_\_

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Mail your registration to Benjamin Draper, Golder Associates, 4900 Koger Boulevard, Suite 140; Greensboro, NC 27407. Questions? Call Ben at (336) 852-4903 or email him at [bdraper@golder.com](mailto:bdraper@golder.com).



## CALENDAR OF EVENTS - 2009

### *Geological Events in the Carolinas*

Courtesy of AEG Carolinas Section – [www.aegcarolinas.org](http://www.aegcarolinas.org). Last updated June 5, 2009

Send updates/corrections to Ben Draper, [Benjamin\\_Draper@golder.com](mailto:Benjamin_Draper@golder.com)

*Meeting Date, Time, and Location are Subject to Change – Please Verify Prior to the Meeting*

---

**Date: June 18-19, 2009**

**Event: Groundwater Professionals of NC (GWPNC)**

**Summer Meeting, 6:00 PM Thursday June 18**

**Golf Tournament, 9:00 AM Friday June 19**

Location: Pinehurst, NC at Little River Golf Resort

Speaker: Connel D. Ware, Senior Project Manager for S&ME.

Topic: Metals Analysis - ICP vs. Graphite Furnace

Contact: Nicole Manning, [nicole@choice-enviro.com](mailto:nicole@choice-enviro.com)

Estimated PDH: Unknown

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**Date: June 23, 2009**

**Event: Groundwater Hydrology Class**

Location: Crowne Plaza Hotel, Hampton, VA

Speaker: Dr. Ted Way

Contact: 1-800-446-7488

Cost: \$250

Estimated PDH: 6 (VA)

---

**Date: June 26, 2009**

**Event: AEG – Carolina's Section Meeting/ ASCE Meeting**

Location: Asiana Grand Buffett, Asheville, NC (see p. 4)

Speaker: Mark Molinari, AEG President

Contact: [bdraper@golder.com](mailto:bdraper@golder.com)

Cost: Members/Non-members \$20, includes one beer/wine ticket, Public-sector employees \$15, Students free with college ID

Estimated PDH: 1

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**Date: June 28- July 1, 2009**

**Event: ARMA - 43rd U.S. Rock Mechanics Symposium  
(see flyer on p. 29 of this issue)**

Location: Asheville Renaissance Hotel, Asheville, North Carolina

Contact: <http://www.armasyposium.org/>

Estimated PDH: Unknown

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**Date: August 2, 2009**

**Event: ASBOG - Reg Review Course**

Location: Raleigh, North Carolina

Time: 8:00-4:00 pm

Cost: \$445 (AEG Member)

Contact: <http://www.regreview.com/summer2009courses.html>

Estimated PDH: Unknown

---

**Date: September 14-18, 2009**

**Event: NCSU Wetland Delineation and Jurisdictional Determination: Post Rapanos-Carabell**

Location: Raleigh/New Bern, NC

Cost: \$895

Contact: <http://www.ces.ncsu.edu/nreos/forest/feop/wetlands/index.html>

Estimated PDH: Unknown

---

**Date: September 21-26, 2009**

**Event: AEG Annual Meeting**

Location: Lake Tahoe, California

Contact: [www.aegweb.org](http://www.aegweb.org)

Estimated PDH: Unknown

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**Date: October 2-4, 2009**

**Event: 2009 Virginia Geological Field Conference**

Location: Big Meadows, Shenandoah National Park, VA

Contact: <http://web.wm.edu/geology/vgfc/2009.php>

Estimated PDH: Unknown

---

**Date: October 10, 2009**

**Event: 2009 AEG Field Trip**

Location: Durham, North Carolina

Contact: [bdraper@golder.com](mailto:bdraper@golder.com)

Estimated PDH: Unknown

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**Date: October 11-17, 2009**

**Event: Earth Science Week**

Contact: Geoff Camphire, [gac@agiweb.org](mailto:gac@agiweb.org), Alexandria, VA

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**Date: October 18-21, 2009**

**Event: Geological Society of America Annual Meeting**

Location: Portland, Oregon

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

Estimated PDH: Unknown

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**Date: March 13-16, 2010**

**Event: Geological Society of America NE & SE Section Meeting**

Location: Baltimore, MD

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

Estimated PDH: Unknown

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## AEG CAROLINAS SECTION – SPONSOR INFORMATION

The Carolinas Section of AEG supports many of its activities with financial assistance provided by our sponsors. Our activities include quarterly meetings, periodic field trips and seminars, a quarterly newsletter, and email announcements about our meetings and geoscience related activities. In addition, we donate educational resources to science teachers.

We offer several levels of sponsorship, but they all have one goal: to keep the sponsor's name in front of our members and to bring you business. We have a real commitment to connecting our sponsors to potential buyers and will do all we can to help you build your business. Most of our members are practicing professionals with responsibility for selecting subcontractors, so our group is a great place to find new customers and to catch up with existing customers in an informal setting.

Our sponsors provide financial support that allows us to have reasonably priced dinner meetings, host seminars, provide discounted dinner meeting costs for students, underwrite the cost of newsletters and our web site, support science education tools to our teachers and in our schools, and provide funding for two \$500 scholarships each year. All costs listed below are per year and end in December. New sponsorships received after October will continue to December of the following year.

### Silver Sponsor (\$250):

GeoNews Newsletter: Business card size ad (2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign-in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at one meeting. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement (our email list is currently over 1,000 people)

Web Page: Acknowledgement on the AEG Carolinas Section Web Page, [www.aegcarolinas.org](http://www.aegcarolinas.org), with a link to your site.

### Gold Sponsor (\$375):

GeoNews Newsletter: Quarter-Page ad (4-1/2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at two meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement (our email list is currently over 1,000 people)

Web Page: Acknowledgement on the AEG Carolinas Section Web Page, [www.aegcarolinas.org](http://www.aegcarolinas.org), with a link to your site.

### Platinum Sponsor (\$500):

GeoNews Newsletter: Half-page ad (4-1/2" high x 7" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibit: Space for tabletop display at three meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG - Carolinas Section email announcement (our email list is currently over 1,000 people)

Web Page: Acknowledgement on the AEG Carolinas Section Web Page, [www.aegcarolinas.org](http://www.aegcarolinas.org), with a link to your site.

### GeoNews Newsletter Sponsorship Only

Businesses or individuals can also advertise in GeoNews without being a full sponsor. The annual rates for advertising in GeoNews are as follows:

Business Card	\$ 40.00
Quarter Page	\$ 60.00
Half Page	\$ 100.00
Full Page	\$ 200.00

Please complete the form below and mail to Jane Gill-Shaler, AEG Carolinas newsletter editor. Please call or email if you have any questions (contact information below).

### AEG Carolinas Section Sponsorship Form

Please begin our sponsorship of the Carolinas Section of the Association of Engineering Geologists. Our sponsorship level is:

- \_\_\_\_\_ Platinum Section Sponsorship, \$500/year  
 \_\_\_\_\_ Gold Section Sponsorship, \$375/year  
 \_\_\_\_\_ Silver Section Sponsorship, \$250/year  
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Contact Person: \_\_\_\_\_

Cell: \_\_\_\_\_

Email: \_\_\_\_\_

Website URL: \_\_\_\_\_

Date of Payment: \_\_\_\_\_

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Please enclose a business card or email ad in jpg, pdf, or doc To Jane Gill-Shaler at [janehgill@aol.com](mailto:janehgill@aol.com).

### MAKE CHECK OUT TO AEG CAROLINAS

Snail mail form and payment to:

Jane Gill-Shaler, AEG Carolinas Newsletter Editor  
 1636 West Lexington Ave., High Point, NC 27262  
[JaneHGill@aol.com](mailto:JaneHGill@aol.com)



## MEMBER BENEFITS

Networking, with colleagues at meetings, through technical publications and on the AEG web page, is a valuable professional development benefit because it allows a member to:

- ♦ Broaden and update technical, practical, and business knowledge.
- ♦ Keep career paths open by assuring that the value, utility and scope of engineering geology is recognized in the scientific, technical, legal, and regulatory arenas.
- ♦ Explore numerous opportunities for career enhancement through contacts at technical meetings and in continuing education programs.
- ♦ Influence the profession of environmental and engineering geology as it serves society and as it is regulated.
- ♦ Establish the standards of the profession.

§§§§§§§§§§§§§§§§

AEG members receive our quarterly professional journal, *Environmental and Engineering Geoscience* and six-issues of the *AEG NEWS* as a regular dues benefit.

Members also enjoy a 20% "member discount" on all special publications, registration fees at meetings, short courses, and field trips.

## PROFESSIONAL DEVELOPMENT

*AEG -- Serving Professionals in Environmental, Ground-Water and Engineering Geology since 1957*

- ♦ AEG sponsors workshops and short courses for which official Continuing Education Units are offered.
- ♦ AEG encourages its members to participate in activities of mutual interest with other societies and organizations.
- ♦ The annual Richard H. Jahn Distinguished Lecturer in Engineering Geology is co-sponsored by AEG and the GSA Engineering Geology Division.
- ♦ AEG members make presentations and lead field trips for students at all levels.
- ♦ AEG's Technical and Professional Practice Committees keep the Association in a position of influence through their wide-ranging activities.
- ♦ AEG's 25 Sections and 20 Student Chapters provide educational and networking opportunities for members through regular meetings, field trips and local newsletters.
- ♦ Students compete for scholarships and awards, and interact with practicing professionals.
- ♦ Short courses, field trips, and technical sessions provide opportunities for AEG members to enhance their professional practice.
- ♦ International members are found in more than 20 countries and Designated Correspondents enhance technology transfer among more than a dozen countries.

## MEMBERSHIP APPLICATION

## ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS



The Association of Environmental & Engineering Geologists (AEG) is an international, non-profit scientific and technical society, whose 3,000 members include geologists specializing in engineering geology, environmental geology, and ground-water geology as well as other professionals in affiliated fields such as civil and mining engineering, land-use planning, public policy and education.

Through its technical and professional activities, AEG strives to promote the value and importance of geologic practice in:

- ♦ detecting, containing, and remediating contaminated soil and ground water,
- ♦ recognizing and mitigating hazardous geologic processes to promote public safety and welfare; and
- ♦ siting, planning, designing, constructing, and maintaining engineered works.

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[www.aegweb.org](http://www.aegweb.org)

## MEMBERSHIP REQUIREMENTS

**MEMBER:** Applicants for Member Class shall hold a degree in geology, engineering geology or geological engineering, or a degree in a related professional field with 30 semester-hours of credit in the geosciences. In addition an applicant shall be practicing in the field of Engineering Geology, Environmental Geology or Hydrogeology. Annual Dues for new (first-time) Members = \$75.00 per year for the first year of membership. Otherwise Annual Dues = \$115.00. Applicants who qualify for Member Class, but are engaged in full-time teaching at the Primary or Secondary (K-12) level are eligible for Teacher Status (Annual Dues = \$35.00).

**AFFILIATE:** Applicants for Affiliate Member Class shall be scientists or engineers who work with engineering geologists; teachers engaged in middle-school and high school Earth Science education; or persons interested in engineering geology. Annual Dues = \$75.00 (Teacher Dues = \$35.00)

**STUDENT:** Applicants for Student Member Class shall be full-time students enrolled in an academic program in the geosciences or in a related field in engineering. Annual Dues = \$25.00

**INTERNATIONAL:** Applicants shall hold the same requirements as for Member Class, but may select from the following dues schedule: \$35, which includes the *Environmental and Engineering Geology Journal*; \$45 with the *Journal*, the *Annual Directory* and the *Annual Meeting Abstracts*; or \$55 with the *Journal*, *Annual Directory*, *Annual Meeting Abstracts* and the *AEG News*.

AEG memberships are based on calendar year. Applications received after October 1 will be entered for following calendar year.

## APPLICATION FORM

Please complete this form and mail it with your Annual Dues payment to the Association's Headquarters office for processing. New member applicants do not pay Section dues for their initial year of membership.

Name: \_\_\_\_\_  
(Please print your name as you would like it shown on your membership certificate.)

PREFERRED ADDRESS: \_\_\_\_\_

WORK PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

PREFERRED E-MAIL: \_\_\_\_\_

Second Address: \_\_\_\_\_

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DESIRED CLASS OF MEMBERSHIP: \_\_\_\_\_ ANNUAL DUES AMOUNT: \_\_\_\_\_

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### CERTIFICATION:

(Signature)

My signature attests that, to the best of my knowledge, I meet the academic and practice requirements for the membership class I have requested and that all entries on this application are true and correct. I also authorize AEG to charge my credit card for the dues payment, if I selected the credit card payment option.

☐ Enclosed is my check for the amount of Annual Dues of \$ \_\_\_\_\_

### Credit Card Payment Option

☐ Discover ☐ Master Card ☐ Visa

Amount of Dues to be charged to my card = \$ \_\_\_\_\_

Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

**SUBMISSION:** Send this form with your check or credit card authorization to:  
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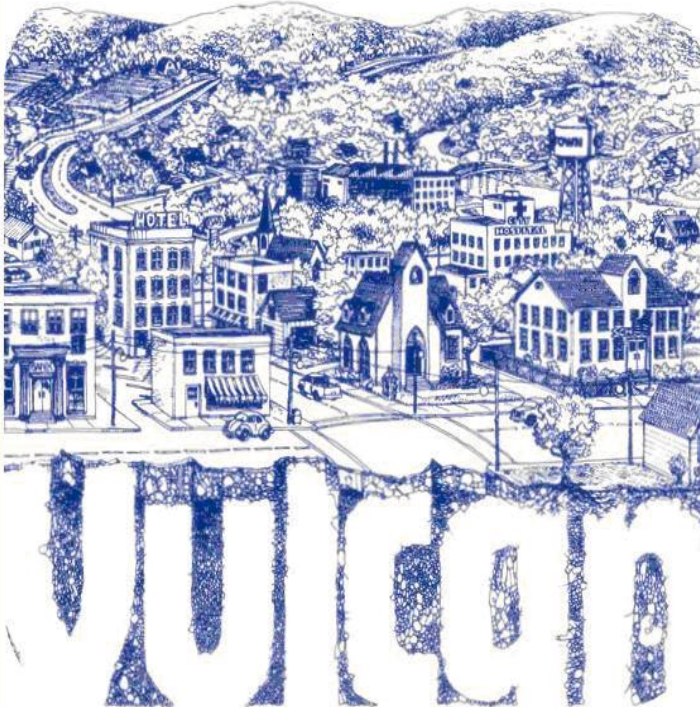
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