



GEO NEWS

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



FALL 2009

ARE WE PLAYING NICE YET? (see page 4)

IN THIS ISSUE:

*AEG Carolinas October 22 Talk By
Bonnie S. Ware, NCDENR 4*

Section Activities This Year 20

AGI ES Kit Giveaway..... 24

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SAVE THE DATE !
OCTOBER 22 IN GREENSBORO
(Want to guess whose busy office this is?
See p. 26 for more choices)

GEONEWS FALL 2009

Issue Date: September 21, 2009

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Cover Photo: *This is an office in the Carolinas. It is generic in nature, and illustrates just one image in the hundreds of offices that may be affected by the information in October's talk by Bonnie S. Ware. Photo courtesy Carla Sherwood, with apologies to one of her co-workers.*

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 21
 Fall – deadline September 1, issue date September 18
 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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MESSAGE FROM THE OUT- GOING CHAIR *By Rick Kolb*

Elections are now complete, and to no one's surprise all four candidates that ran won the election. Starting at the annual meeting in Lake Tahoe, our newly elected officers officially will take office. Please welcome former Vice Chair Paul Weaver as the new Chair of the Carolinas Section, Brad Worley as the new Vice Chair, and the reelection of Dave Duncklee and Kristen Lloyd as Treasurer and Secretary, respectively. I thank them for volunteering to serve/continue to serve our section. As you know, our board is comprised of volunteers. We are a fortunate section to have a great group of active, take-charge members who serve as the section's "management committee" and who have made this section among the strongest in AEG. For those of you who weren't at the recent section meeting in Asheville, our guest speaker, AEG's President Mark Molinari, told the audience that our section is an example of what he thinks all AEG sections should strive to be. As outgoing section Chair, I would like to thank the management committee for your hard work and dedication in improving and growing our section, and in preparing to host the 2010 Annual Meeting that will be held in Charleston next September. Since this is my last Message from the Chair, I want to explicitly thank our management committee here. These are the people who run your section and who have made it what it is:

Vice Chair and incoming Co-Chair Paul Weaver of Kleinfelder in Greensboro, who graciously accepted my arm-twisting to be chair for the next two years. Paul is an engineering geologist who will bring a little different focus than I do, as an environmental geologist. He also has volunteered for a major role in the 2010 meeting as chairman of the technical sessions.

Treasurer Dave Duncklee, who with Tom Dunham runs Duncklee & Dunham, and who joined AEG and agreed to serve on the board without having any exposure to our organization. Dave has done a great job and is an outstanding conservator of our bank account. He has had to reel in my spending suggestions more than once; otherwise, we'd probably be broke. Like me, Dave is a former President of Ground Water Professionals of North Carolina, and I knew he would be a great board member.

Secretary Kristen Lloyd, who came to us fresh out of graduate school at NC State and who brings the perspective of a young professional. Though as the junior member in MACTEC's Greensboro office she is often in the field, she has still actively participated, occasionally by cell phone. I hope we can attract more of our younger

members to the board because these younger members, like the students we meet, are the future of our profession and organization.

Former Chair and now AEG Secretary (to be Treasurer at the annual meeting) Jennifer Bauer, without whom I would have been totally lost my first year as chair. Jennifer is a great resource and a dedicated member of AEG. She is extremely intelligent and has many great ideas and lots of initiative, which are some of the reasons she was selected to be in AEG's leadership. She continues to provide the board and me tons of advice.

Newsletter editor and sponsor-chaser Jane Gill-Shaler, who does a wonderful job with our newsletter and soliciting sponsors. I still remember Jahns Lecturer John Moylan looking at the newsletter I gave him and saying it was the best of any he'd seen from other AEG sections. It

is a great-looking newsletter and Jane spends a lot of time working on it. It serves as an excellent advocate for our section and gives a great impression to other sections and non-members.

Former Chair and webmaster (or "webnovice" as she prefers) Tami Idol of NCDENR has spent countless hours on the website, and is now in the middle of a major website upgrade that will be completed this fall. And she has done this work while living in Chatham County, without high-speed internet access and with a laptop that I would have put a bullet through long ago. But she has persevered, and we all look forward to the new website.

Former Chair and section advisor emeritus Gary Rogers of Schnabel in Greensboro, who has served as our historian (e.g., we tried this and it worked, we tried this and it didn't work) and advisor to many of the board members for the past decade or so. He is a long-time advocate for AEG and has been the leader in efforts to revive the Southeastern Section, which had gone dormant. We are on track to resurrect that section, starting with a section meeting this October in Atlanta, due to a few energetic volunteers in that section working with Gary and me.

Former Treasurer Raymond Knox of Schnabel in Columbia, who is now one of the advocates for our members in South Carolina and who was the long-time Treasurer before we persuaded Dave to take the position. His efforts helped build a great fiscal foundation for our section.

Former Secretary and 2010 Meeting Dr. Briget Doyle, who brings her unique perspective to us practicing geologists, and who started our efforts to bring students to AEG. Briget was instrumental in starting our section's first student chapter at the College of Charleston. She has a challenging year ahead of her with the annual meeting coming up and at the same time coming up for tenure. No stress there, I'm sure.



(Continued from page 3)

Former Vice Chair and now Membership Co-Chair Carin Kromm, who works with Kristen at MAC-TEC in Greensboro. Carin volunteered (with my subtle persuasion) to step in for Misti Benchabbat as Vice Chair when Misti transferred to Atlanta. Carin is also a past President of the Ground Water Professionals of North Carolina. Yeah, for a while there, MACTEC had cornered the section board.

Field Trip Chairman Ben Draper, who we assigned to this position when he missed a conference call. But he didn't complain, and he's setting up our section's fall field trip. In addition, he was drafted/persuaded/coerced, again without complaint, to take the lead on putting together the newsletter calendar, a job that no one leaped up to grab.

Thanks to all of these people, all of whom have made my three years as Chair a real pleasure. Our section has grown from around 75 members and no students in August 2006 to 189 members, of which 81 are student members and recently-joined professors, in August 2009. This growth and the success of our section would not have been possible without the work of our management committee. They are a great group of geologists, and it truly has been my pleasure to work with them for the past three

(Continued on page 6)

AEG CAROLINAS OCTOBER 22 MEETING

Program: "Playing Nice; Intra-Agency Communications"

Speaker: Bonnie S. Ware, NCDENR

Place: Natty Greene's Pub & Brewing Co.,
345 S. Elm Street, Greensboro, NC 27401

Date: Thursday, October 22, 2009

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

Directions: See page 5

Cost: Member/Non-member \$25; Public Sector employees \$15

Students: FREE with college ID

Reservations: Please make reservations by 5pm on October 19, 2009 with;
Carin Kromm CLKROMM@mactec.com
MACTEC Engineering and Consulting, Inc.
(336) 294-4221 (office)
(336) 409-6748 (cell)

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

OCTOBER 22 TALK AT NATTY GREENS TO FEATURE NCDENR'S BONNIE S. WARE

"Playing Nice - Intra-Agency Communications" is the title of the talk by Bonnie S. Ware at the AEG Carolinas section talk on Thursday, October 22, 2009 at Natty Greene's, 345 South Elm Street in downtown Greensboro.



This is a great venue, and we have had many talks there in the past. Directions and details are in the blue box on this page. For reservations, please contact Carin Kromm CLKROMM@mactec.com, (336) 294-4221.

Abstract: The recent re-organization of the North Carolina Department of Environment and Natural Resources (NCDENR) facilitated the need for enhanced intra-agency communications when addressing multiple projects with shared jurisdiction and incident management responsibility among the Departments within the Agency itself, as well as other government agencies and the private sector. This re-organization would change multiple aspects of environmental incident management within NCDENR. Through this re-organization and the work that has ensued has come a crash course on communications between Departments within NCDENR as well as working with the EPA, additional State agencies, local municipalities, local governments, multiple forms of media and citizens.

Although not "scientific," the aspect of communications has come to light as playing a very instrumental and vital role in the progress of environmental incidents assessment and remediation. Proper coordination of multiple agencies can assist project aspects such as funding, work force and timelines. Understanding individual agencies talents and limitations can greatly assist the consultant and or regulatory incident manager working with these environmental incidents.

This presentation will discuss agency structures, organization, and relationships. Common incident project scenarios will be worked through and explained, allowing for open floor discussions.

Speaker Biography: Bonnie S. Ware is a Hydrogeologist II for the North Carolina Department of Environment and Natural Resources (NCDENR). She initially joined NCDENR as a no-responsible party (non-RP) State Incident Investigator within the Division of Water Quality, Aquifer Protection Section. Once the re-organization was set into place, Bonnie attained an incident manager position (Hydrogeologist II) within the Division of Waste Management, Inactive Hazardous Sites Branch under the Superfund Section.

She has worked for ES&T (now a division of

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GES) and S&ME Greensboro. She is experienced in: RCRA/CERCLA assessment, remediation, permitting and regulatory compliance; managing all technical aspects of environmental projects that include assessment, analysis, remediation, project design, implementation, regulatory compliance, research and reporting. Her consulting experience allowed her to provide cost effective and timely solutions for complex environmental remediation projects and risk assessments. Bonnie is experienced with hydrogeologic assessments for various contaminants as well as for NCDENR permitting and she maintains a thorough knowledge of the latest environmental regulations. She is responsible for large scale and/or complex projects.

Bonnie joined NCDENR in 2006 with 6 years of prior consulting experience. She has a B.S. degree in Geology, specializing in Environmental and Hydrogeology, from Virginia Polytechnic Institute and State University (Virginia Tech), in Blacksburg, Virginia. Bonnie has over 10 years of experience as a hydrogeologist.

She is married to Connel Ware, a Senior Project Manager with S&ME Greensboro and together they are the proud parents of two children, Brock and Sharon.

Bonnie is a member of the NCDENR Sustainability Team and the Division of Waste Managements Safety Team. She also enjoys community volunteering as a member of the Alpha Phi Omega Piedmont Alumni As-

sociation (A National Co-ed Service Fraternity) and giving talks to elementary school students about Geology and Environmental Sciences.

Directions:

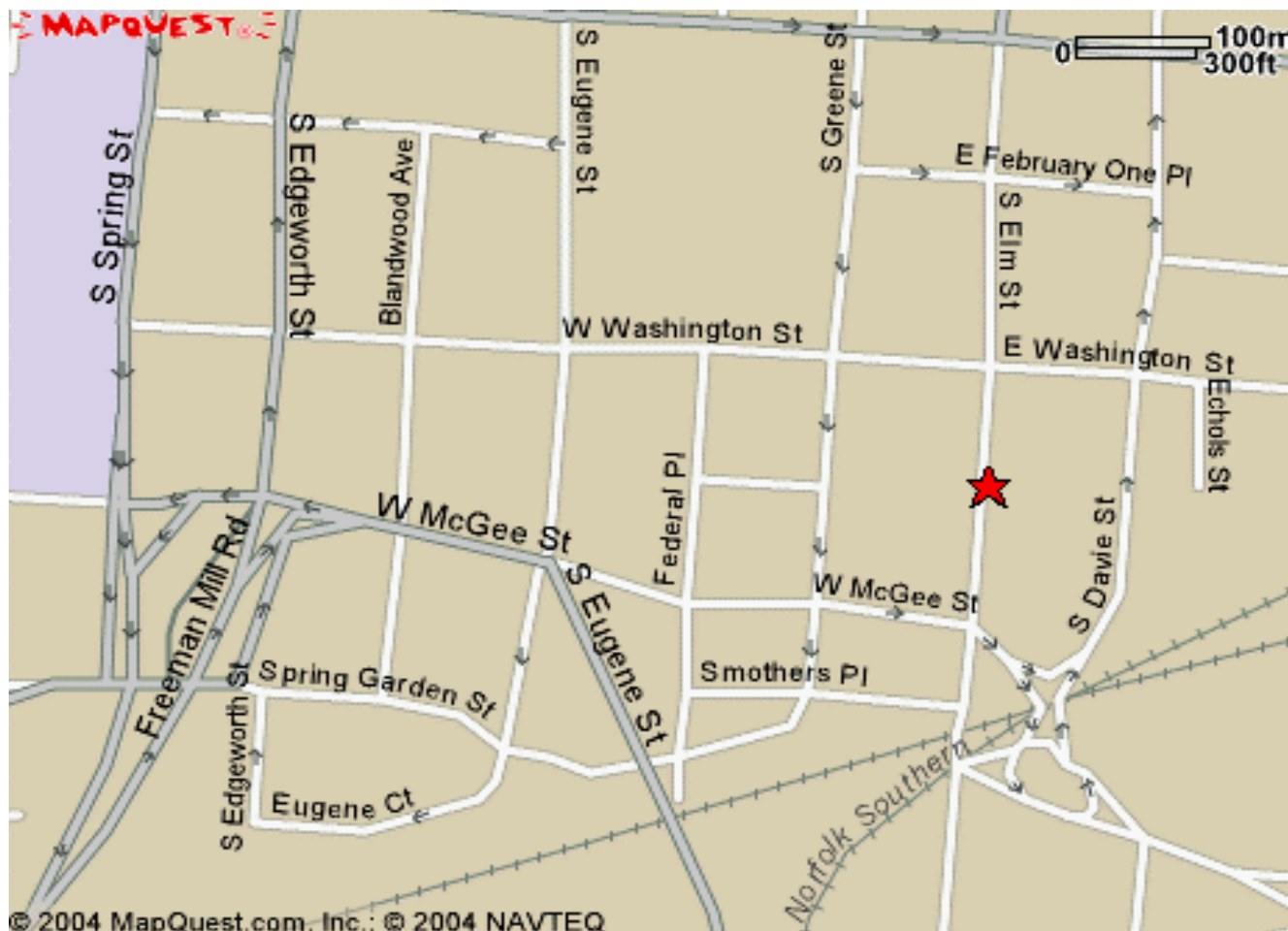
From the East or West:

Take I-40 to Exit 218B, Freeman Mill Road North (also labeled as Coliseum Area). Go about 2-1/2 miles on Freeman Mill Road (the name will change to Edgeworth as you travel north) to Washington St., Turn right on Washington and go 5 blocks to S. Elm St. Turn right onto S. Elm, go about 1/2 block and park in the free public parking lot on the right. The meeting will be in a private room on the third floor of Natty Greene's

From the South:

Take I-85 North and exit onto Business I-85 (about mile marker 120), then take Exit 122 (US 220, Future I-74). This will turn into Freeman Mill Road North, then to Edgeworth as you travel north. Go about 4 miles to Washington St., Turn right on Washington and follow the directions above.

To return to the interstate, go back the way you came on Elm and Washington St, passing over S. Edgeworth to S. Spring St. Turn left on S. Spring St. which will merge back into Freeman Mill



AEG CAROLINAS TREASURER'S REPORT

By David Duncklee, Treasurer

AEG Carolinas Section Treasurer's Report May 14, 2009 - July 9, 2009

Balance Carried over	
Checking Account	\$6,144.04
Money Market Account	\$12,084.65
Charleston Planning Account	\$3,000.79
INCOME	
Dinner Meetings	\$535.00
Sponsorships	\$1,125.00
AEG Dues rebates	\$30.00
Defined donations	
AGI Toolkits	
Scholarships	
AEG Short Course Attendees	\$500.00
AEG Short Course Sponsors	
SUBTOTAL	\$2,190.00
EXPENSES	
Dinner Meetings	
Asheville Meeting	\$808.61
Educational Programs	
AGI Toolkits	
Student Memberships	\$75.00
Student Travel Grants	
NC Licensing Board AEG	
Continuing Ed Seminar	
Visiting Professionals	\$67.02
Website Development	\$775.00
SUBTOTAL	\$1,725.63
BALANCE	
Checking Account	\$6,608.41
Money Market Account	\$12,085.89
Charleston Planning Account	\$3,001.24
TOTAL	\$21,695.54

Respectfully Submitted,

David L. Duncklee

Treasurer, AEG Carolinas

(Continued from page 4)

years. I look forward to continued growth and increasing energy in our section, and am proud of the prominence our section has achieved. For me personally, it has been a lot of fun. I encourage YOU to consider volunteering for a board position next year. I think you, too, will have fun working with this great group of people. We owe a thank you to our sponsors for their support, which has allowed us to offer free student membership and section dinners to the students. Be sure to thank them for this support the next time you see any of them.

Okay, back to business. Our latest section meeting was in Asheville on Friday, June 26, held jointly with the western branch of ASCE. We all know the stories about engineers and geologists, but this time at least we all mixed well, and I had to put a halt to the social hour, still going strong at 7:10 PM, to allow us to keep on schedule. The meeting was a great success, with 50 in attendance, and the venue, as those who went know, was great. I expect/hope the board will decide to hold a section meeting in Asheville each year, which I am sure AEG Secretary Bauer, who lives close by, will support. At our next conference-call board meeting, we will discuss having the 2010 Asheville section meeting in the fall, when the leaves are changing. Elsewhere in this newsletter are announcements for this year's fall meeting in Greensboro and a fall meeting in Columbia, held jointly with the South Carolina Association of Environmental Professionals, arranged by Raymond Knox. I hope we can have at least one meeting a year in South Carolina to serve our members in that state. If you are an AEG member in South Carolina and are interested in having section meetings in South Carolina on a regular basis, talk to any of the board members. We are open to hear your thoughts on venues and speakers in Charleston, Columbia, and Greenville/Spartanburg. Maybe Myrtle Beach? Their contact information is on page 2 of this newsletter.

Your 2010 Annual Meeting committee continues work and holds conference calls at least every other month, and will soon have these monthly. We've identified the committee chairs, as shown on page 9 of this newsletter, and ask for YOU to volunteer to help. You can do as much or as little as you like, but please volunteer. The chairs can't do all the work. The more volunteers we have, the easier it will be on everyone and the

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Fax: 904-296-6210

Corporate Office:

10775 Central Port Drive,
Orlando, FL 32824

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better the meeting will be. If you're interested, start by simply listening in on our next conference call. You can find the contact information for the 2010 Annual Meeting Committee in the flyer on pages 18 and 19.

The 2009 annual meeting in Lake Tahoe is just about here. Attendees from our section include Paul Weaver and Jane Gill-Shaler, who will represent our section at the board meeting on the weekend that follows the annual meeting, Jennifer Bauer, Briget Doyle and Rick Kolb. Look for a summary article on the board meeting in the next newsletter. Personally, I can't wait to get back to the mountains of the west, where the dang vegetation doesn't cover the great geology.

Fall is here and the students have returned to their campuses. We look forward to working with our new student chapters at UNCC and the College of Charleston. At the board meeting in Lake Tahoe the student chapter of NC State University will be anointed. We look forward to working with these chapters, most of which will have new student leadership this year, and expect/hope we will see students from these schools at our section meetings. This fall we will resume our efforts to establish student chapters at Appalachian State University, Guilford College, and the University of North Carolina at

Chapel Hill. We will visit all of these schools again under AEG's Visiting Professional (VP) program, and we hope to have visits to East Carolina, Western Carolina and Clemson for the first time. If you are interested in talking to students about careers in geology (i.e., your career and other topics), please volunteer, especially if one of the schools is your alma mater. It is a lot of fun. I have made presentations at least five times and I think I get as much out of it as the students do. Contact any board member if you are interested in participating. You will have fun, I promise.

Do you know about AEG's Technical Working Groups and Operational Committees? Do you want to get involved in AEG but maybe not at the section level? There are a myriad of opportunities to use your knowledge, interests and energy in these groups. At the suggestion of Jennifer Bauer, I volunteered for a committee, and when I started looking into them, I found more and more of them that interested me. Granted, I may have overcommitted myself, but I am on the Advocacy, Student and Young Professional Support, and Strategic Planning committees, and the Licensure and Continuing Education ad hoc committees. I could volunteer for a couple more if work didn't get in the way. Typically these committees have one conference call a month, so the time requirements are not great. Take a look at the committees and working groups and see if you find one that piques your interest. They are always looking for volunteers. You will meet other AEG members from all over the country, and you'll learn a lot about other members, our organization and our profession. I encourage you to look at volunteer opportunities. Remember, AEG is only as strong as our volunteers. Be part of helping AEG grow. It will benefit you, too.

Cheers,

Rick Kolb

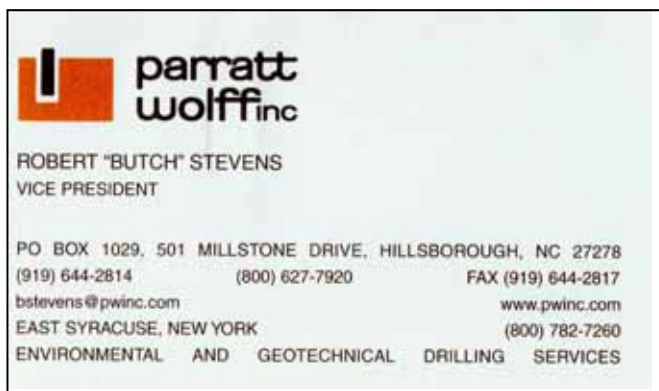
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WELCOME TO THE 'NEW' AEG CAROLINAS BOARD

The Carolinas Section election results are in, and we offer our congratulations and welcome to the new and returning members of our Board.

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. Paul is currently the Manager of the Transportation/Drilling department of Kleinfelder (formerly Trigon Engineering Consultants, Inc.) in Greensboro, North Carolina.

Vice Chair: Brad Worley, L.G., NCDOT Geotechnical Engineering Unit.

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 is returning as Secretary of AEG Carolinas.

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 returning for another term as Treasurer.

ANNUAL MEETING PLANNING COMMITTEE UPDATE—2010

Our Committee has been hard at work getting all the information ready to bring to the AEG 2009 Meeting at beautiful Lake Tahoe in California this week. So if you want to help us, please email one of the committee chairs below, and let them know you are all ready to go, ready to learn all kinds of useful experiences when you help put on what we hope is one of the best AEG Meetings ever. Briget Doyle would love to hear from you!

We especially need a Special Publications Chair, and a Chair for the Poster Sessions.

General Chair: Briget Doyle, College of Charleston, doyleb@cofc.edu.

Vice Chair: Norm Levine, College of Charleston, LevineN@cofc.edu

Field Trip Committee: Co-Chairs: Tami Idol, tami.idol@ncdenr.gov and Jennifer Bauer, jennbbauer@gmail.com

Field Trip Guidebook: Jane Gill-Shaler, JaneHGill@aol.com

Finance Manager/Committee: Chair: Rick Kolb, RA-Kolb@MACTEC.com

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AEG's 2010 Annual Meeting

September 20-25, 2010

Historic Francis Marion Hotel, Charleston, SC



- Special Event on the USS Yorktown
- Informative Field Trips from the Mountains to the Coast.
- Educational Short Courses
- Low Country Hospitality

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

Hosted by Carolinas Section

Photo Credit: Paul Puzer, Photo Charlotte

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Sponsor Solicitation: Co-Chairs: Jane Gill-Shaler, JaneHGill@aol.com and David Duncklee, dave@dunckleedunham.com

Outstanding Environmental & Engineering Geologic Project Committee: Chair: Raymond Knox, rknox@schnabel-eng.com

Publicity Committee - Regional: Chair: Gary Rogers, grogers@schnabel-eng.com

Short Course Committee: Chair: David Duncklee, dave@dunckleedunham.com

Teachers Workshop: Chair: Carin Kromm, CLKROMM@mactec.com

Special Events Activities Committee: Co-Chairs: Nancy Agosta and Rick Kolb RAKolb@MACTEC.com

Spouse/Guest Activities and Hospitality Room Manager/Committee: Chair: Madelyne Adams, mradsams@edisto.cofc.edu

Student Volunteer Coordination: Chair: Norman Levine, LevineN@cofc.edu

Technical Sessions and Symposia Committee: Co-Chairs: Paul Weaver, pweaver@kleinfelder.com and Peter Pozzo, ppozzo@kleinfelder.com

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

We very much look forward to reading your enthusiastic emails!

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MACTEC is headquartered in Atlanta and is a leading consulting firm that provides engineering, environmental, and construction services. MACTEC has over 3,000 employees in 80 U.S. locations and has offices in Asheville, Charlotte, Greensboro, Research Triangle Park, Raleigh and Wilmington, North Carolina and in Greenville and Columbia, South Carolina.




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GEORAMBLINGS

By Dr. Charles W. Welby

Sometimes one has to admit that geology is a fun-time thing. Well, it is most of the time, in my opinion, and is more than a “life’s work.” So with this thought in mind I am attempting to provide a note or two on some recent travel experiences where knowledge of geology has provided a bit more excitement than just the visit to “new and wonderful” places.

In June of this year (2009) I had the opportunity to travel to China with a group of U.C. Berkeley alumni. The emphasis of the trip was on not only the usual “sight-seeing” of places in China but also on some of the water resources matters that are facing China as well as the world. One could cut the air with a knife in Beijing and Shanghai and some other cities, but high on the Tibetan Plateau, it was a bit cleaner. With regard to water resources, the Tibetan Plateau can be viewed as a third pole in the control of weather and thus the supply of water that reaches the surface of the earth.

Flowing out of the Tibetan Plateau with headwaters close together are three rivers, the Nu, the Mekong, and the Yangtze. The two former deliver their water to the South China Sea and their discharges there are important to the fisheries and livelihood of millions of people. The Yangtze but for some geologic history would also do the

same. Apparently related to the collision of the Indian subcontinent into the Asian crustal block, there is a massive limestone (Paleozoic?) block west of Lijiang which blocks the southward flow of the Yangtze and causes it to form the famous bend northward, leading the river to flow eastward to Shanghai. There may be an instance of stream capture involved here also, and there is an apparent continuation of the Yangtze River shown on maps that flows southward toward Viet Nam but whose origin lies south of the limestone block.

China, in its wisdom, is planning a number of dams on all three rivers. The dams are to be built in narrow valleys, and the first of these is the famed “Three Gorges Dam,” behind which the reservoir is currently filling. One important aspect of the program of construction of the dams is that they are for hydroelectric power alone, and the water that was once available for irrigation in fertile valleys is converted to another use. Driving through the stream valleys and across the Tibetan Plateau, one is struck by the geomorphic evidence for faulting and the frequency of large landslides. In fact, one scheduled visit to the famed “Tiger Leaping Gorge” in the area taken to be the “Shangri La” of James Hilton’s novel of the same name was cancelled because a massive landslide had occurred and blocked the only road in and out of the valley.

A visit to the Duijiangyan area, the site of the Zipingpu Dam on the Min River, provided an opportunity

(Continued on page 11)



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(Continued from page 10)

to view some of the landslides that developed in conjunction with the May 8, 2008, Sichuan earthquake in which hundreds of people were killed. The epicenter of the earthquake was about 50 miles northwest of the dam site. The original dam and reservoir were constructed some 2200 years ago as was the irrigation system which delivers water to the agricultural area lying to the east in the Sichuan Basin. Evidence of the multitude of landslides that developed along the edges of the basin were still in evidence. Within the city of Duijiangyan one could observe buildings that had been damaged by the earthquake but had not yet been torn down. One of the interesting observations about the earthquake itself is that the maximum damage occurred on the hanging wall of the fault. An article in the AAPG Bulletin Vol. 90, p. 1425-1447, provides insight on the gas resources of the Longmen Shan fold thrust belt, and from it one can confirm the position of some of the thrust faults imaged on satellite imagery of the area. The Longmen Shan (mountains) border the Mesozoic and Cenozoic foredeeps that underlie the Sichuan Basin.

Many of the World's Heritage sites that lie along the Tibetan Plateau are focused on the water resources: shallow lakes and waterfalls. One of these is described in a National Geographic Magazine for March 2009 article. One can observe (between the visitors') geologic processes that are common in shallow water bodies. Most of

the lakes are shallow, and infilling of some to form marshes is a common feature.

I hope that in the above material I have provided the excitement of visiting "strange places" and utilizing one's geologic knowledge to understand not only the scenery but also, perhaps, the understanding of the sociological and economic impacts that geologic process from the past and the present have upon the world of today and tomorrow.

And finally, a bumper sticker seen in the Raleigh area: "Don't Bark, Wag your tail."


Preceded by something indicating how to get ahead in the world.

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.

(ED: Dr. Welby's column on part 2 of the History of Geologist's Registration in North Carolina will be published here at a later date. Traveling made researching his papers impossible.)


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NC GEOLOGICAL SURVEY COMPLETES LANDSLIDE HAZARD MAPS FOR BUNCOMBE COUNTY

By Jennifer Bauer, NCGS

On Monday, August 24th, the North Carolina Geological Survey (NCGS) delivered the completed Geographic Information System (GIS) versions of the Landslide Hazard Maps to Buncombe County officials.

The intent of the Landslide Hazard Mapping program, authorized by the North Carolina General Assembly, is to provide the public, local government, and emergency agencies with a planning tool that describes and locates areas where landslides have occurred or are likely to occur, and the general areas that could be affected by future landslides.

The maps are intended primarily for use in a GIS environment where they can be used for planning purposes at a scale of 1:6,000. Included with the delivery are digital versions of the maps formatted to allow printing as a series of three, 1:54,000-scale sheets. The printed maps are smaller scale representations of the higher resolution GIS maps. The maps, either in printed or GIS formats, are not intended to substitute for an onsite investigation by a

qualified engineer or geologist.

To see an example of the format the Buncombe County maps are in, visit our Watauga County Mapviewer at: http://wfs.enr.state.nc.us/fist/fistMain.php?site=Watauga_Landslide_Mapviewer. We anticipate creating a mapviewer for our Macon and Buncombe County maps as well.

Mapping in Buncombe County led the NCGS to discover several interesting facts about landslides in the county:

- There have been at least 315 landslides in the last 60 years;
- 6 buildings have been damaged or destroyed by landslides;
- 5% of the county is covered by slope movement deposits;
- 10% of the county is in the high hazard zone based on the Stability Index Map;
- 23% of the county is within Potential Debris Flow Pathways;
- 99% of landslides starting on unmodified ground are on slopes of 20° (36%) or steeper;
- 47% of mapped landslides started on unmodified slopes; and,
- 51% of mapped landslides started on slopes modified by human activity (2% of the slides are on slopes where it is unknown if the slope was modified or not).

(Continued on page 13)



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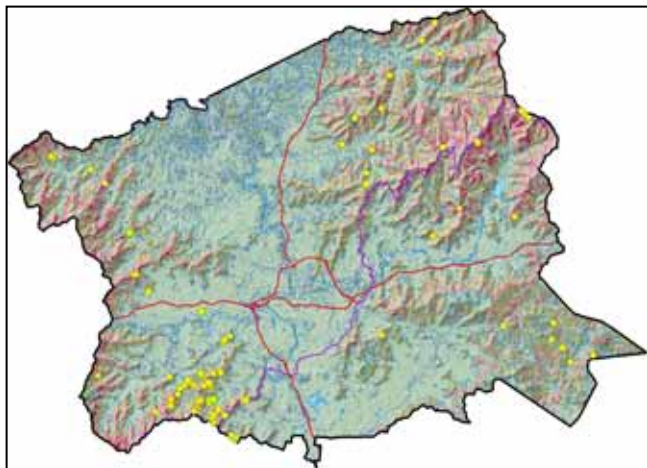
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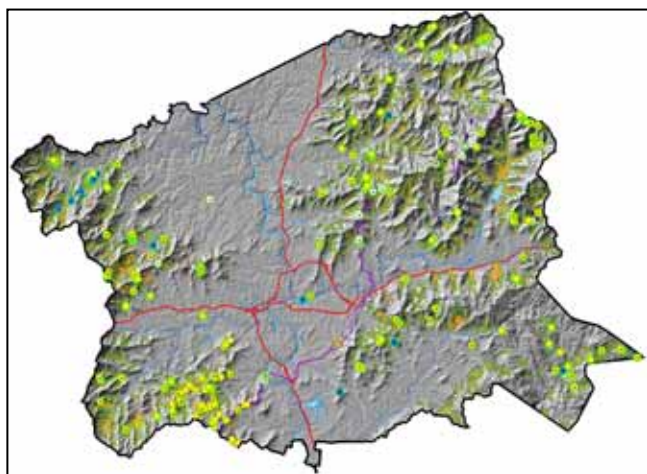


Buncombe County Stability Index Map

(Continued from page 12)

If you would like to purchase the digital data or paper copies of the maps, or if you have any questions regarding the maps or the landslide hazard mapping program, please feel free to contact the N.C. Geological Survey – Asheville Regional Office at 828-296-4500, or visit our website <http://www.geology.enr.state.nc.us/>.

Jennifer Bauer is a geologist with the NCGS based in the Asheville Regional Office. She is currently Secretary of the AEG, and a former Section Chair of AEG Carolinas Section.



Slope Movements – Slope Movement Deposits Map

AGI/AWG WOMEN IN GEOSCIENCES DAY IS SET FOR OCTOBER 15, 2009

From AGI E-News

Each year AGI organizes Earth Science Week, the geoscience community's premier public awareness campaign, to promote understanding of the Earth sciences and encourage stewardship of natural resources. Since its inception more than a decade ago, the annual celebration has grown significantly. More than 20 million people learned about the geosciences, and the campaign, through Earth Science Week in 2008.

This year, Association for Women Geoscientists, or AWG, in conjunction with AGI, is proposing to initiate a "Women in the Geosciences Day" which will take place on the Thursday of each Earth Science Week (the second full week of each October). October 15 will be the 2009 Women in the Geosciences Day.

We are asking for your support in this inaugural "Women in the Geosciences Day". Here are suggestions for activities:

- Invite a female geoscientist as a colloquium/lecture series speaker on October 15 (or as close as possible to Oct 15th)
- Visit your local high school to talk about what Geoscientists do
- Organize events with female speakers at a local museum
- Organize a Girl Scouts/Boys Scouts event for Rocks Rock badges
- Take a 4H group on a field trip to look at rocks, minerals, soils, etc.

In all events, we encourage the participation of your female members. If you would like to contact a local AWG member for help, please contact us for a list of members.

Additionally, if you do hold an event, we would appreciate hearing about it. Please send us a note at office@awg.org.



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EDUCATION SECTION

EARTH SCIENCE WEEK HEADED YOUR WAY— OCTOBER 11-17, 2009

Heading back to school? Now is the time to make plans for Earth Science Week, held Oct. 11-17, 2009. The 12th annual Earth Science Week will celebrate the theme “Understanding Climate” with a wide range of exciting activities, programs, and resources designed to help young people understand the large-scale weather patterns that make up climate.

Pitch in to promote geoscience literacy. Conduct activities described on the Earth Science Week website at <http://www.earthsciweek.org/forteachers/index.html>. For more ideas, see recommendations at <http://www.earthsciweek.org/forplanners/index.html>.

This year’s event is shaping up to reach even more than last year’s total audience of over 20 million people. To learn more or to order an Earth Science Week 2009 Toolkit, visit the event website at <http://www.earthsciweek.org>.

AEG PROMOTES ENVIRONMENTAL AND ENGINEERING GEOLOGY (FROM AGI NEWS)

The Association of Environmental and Engineering Geologists (AEG), an AGI member society, not only provides leadership, advocacy, and applied research in environmental and engineering geology - the association encourages educators to join and make use of its abundant resources. Resources for members include technical publications, section and chapter meetings, and special educator sessions at the annual meeting. Opportunities for professional geologists to speak to classes are also available to members, as well as resume writing workshops and scholarships for students. The AEG 2009 Annual Meeting will take place at Lake Tahoe, California, Sept. 21-26. To learn more or register, see <http://www.aegweb.org>.

AEG also links to AGI’s K-5 GeoSource online at <http://www.aegweb.org/i4a/pages/index.cfm?pageid=3361/>. K-5 GeoSource is an online professional development tool for elementary-level teachers who offer instruction on Earth science topics such as weather, fossils, rocks, soil, and water. To find out more about what AEG has to offer or become a member, visit <http://www.aegweb.org>.

MENTORS NEEDED FOR 2010 HIGH SCHOOL GRADUATION SCIENCE PROJECTS

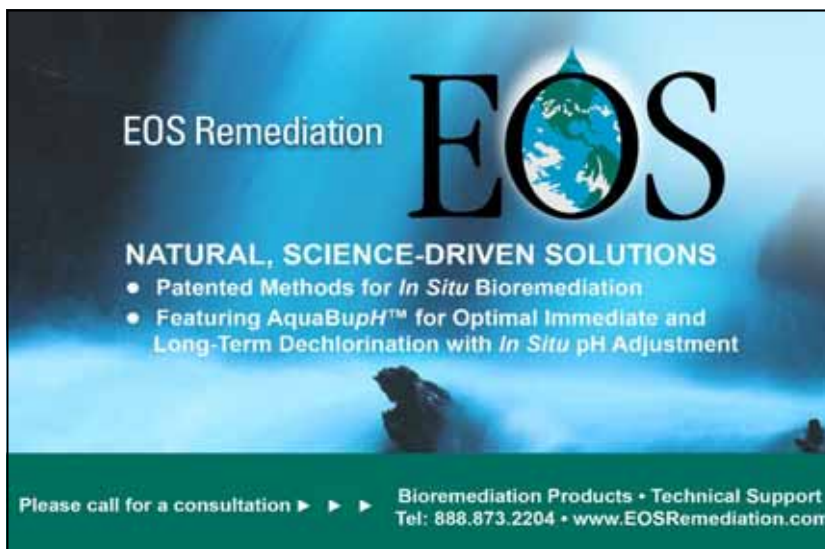
Letter from Sarah Yelton, NCDENR Office of Environmental Education

Are you a professional in an environmental or natural resources field? Are you willing to mentor a high school student interested in your area of expertise? Beginning with the class of 2010, all NC students are required to complete a Graduation Project in order to earn their high school diploma. In an effort to support and encourage students wishing to engage in an environment-related project, the Office of Environmental Education is identifying individuals within North Carolina who have expertise and experience with an environmental topic and who would agree to serve as a mentor if approached by a student or teacher. We currently have 117 environmental mentors listed in 63 counties for topics ranging from agriculture and air to wastewater and wetlands. This is a wonderful opportunity for using your community service leave.

Environmental mentors are especially needed to work with students in the following counties: Alexander, Alleghany, Bertie, Bladen, Brunswick, Camden, Cherokee, Chowan, Clay, Cleveland, Currituck, Davie, Duplin, Edgecombe, Gates, Graham, Greene, Halifax, Hertford, Hyde, Jackson, Jones, Lenoir, Lincoln, Macon, Martin, Nash, Northampton, Pamlico, Pasquotank, Pender, Perquimans, Polk, Surry, Swain, Washington, Watauga

According to the NC Department of Public Instruction, a graduation project mentor is a community and/or faculty member who has expertise and experience with the project topic and accepts the following responsibilities:

(Continued on page 15)



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(Continued from page 14)

- Allocates time and makes arrangements to work with the student on the project.
- Provides suggestions and advice to the student on applicable aspects of the research paper, product, portfolio, and oral presentation
- Provides accurate and honest verification of the student's work
- Serves as a support and resource to the student in all stages of the graduation project process
- Signs and returns all required forms.

Anyone from the community who is 21 years of age or older and is considered to be an expert in the field a student is researching for the project may serve as a

graduation project mentor. Mentors must follow the school or school system's volunteering/mentoring policies and approval procedures, which varies across the state. Please check with the student's school to find out what policies are in place if approached to act as a mentor. Although the actual time commitment will vary by project and student needs, mentors should be committed to supporting students through the end stages of their project.

Please fill out the Mentor Survey http://www.surveymonkey.com/s.aspx?sm=VpG4ySzk0Fe3hvJ6NQBx_2fQ_3d_3dif if you (or your organization) are interested in mentoring a student in your community on an environment-related graduation project. The information you submit will be reviewed by OEE staff, and with your permission, posted on the OEE Graduation Project web site.

Sarah Yelton is the PreK-12 Environmental Education Program Manager, Office of Environmental Education, NC Department of Environment and Natural Resources. She may be contacted at www.eenorthcarolina.org.

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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.

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SCAEP/AEG JOINT MEETING IN COLUMBIA OCTOBER 15

SCAEP and AEG Carolinas are planning a joint meeting in Columbia SC featuring a talk on Coastal SC, based on a book that the speakers have recently published.

The date and time are October 15, 2009, starting at 6:30pm. The location is at the offices of RPI at 1121 Park Street in Columbia, SC. To make reservations, or for more information, contact Raymond Knox, rknox@schnebel.com.

Abstract: A Coast for All Seasons; A Naturalist's Guide to the Coast of South Carolina

The coastal geology of South Carolina is complex, formed by the combined processes of sea level rise, sediment supply, waves, and tides. The presentation consists of two parts. Part I describes the general processes and landforms of the coast, explaining the history of how the South Carolina coast evolved and how processes such as waves, tides, sediment supply, and sea level rise have combined to produce the modern coastal features such as barrier islands, deltas, estuaries, tidal flats, and salt marshes. We include discussion of the impacts of hurricanes, changes in sediment supply that are both natural and man-made, the beach cycle, and methods to control erosion. Part II describes in more detail the coastal geomorphology of each of four compartments: the Grand

Strand; the Delta Region; the Barrier Islands; and the Low Country. Explanations are provided for key features of the coast such as Carolina bays, capes, barrier islands, and tidal inlets. The presenters, two coastal geologists, who have 35 years of experience conducting scientific research on the coast, tell their story of discovery and fascination through engaging conversation, richly illustrated original diagrams, aerial photographs, and satellite imagery that paints a truly complete picture of a complex topic rarely so smoothly distilled from the scientific literature.

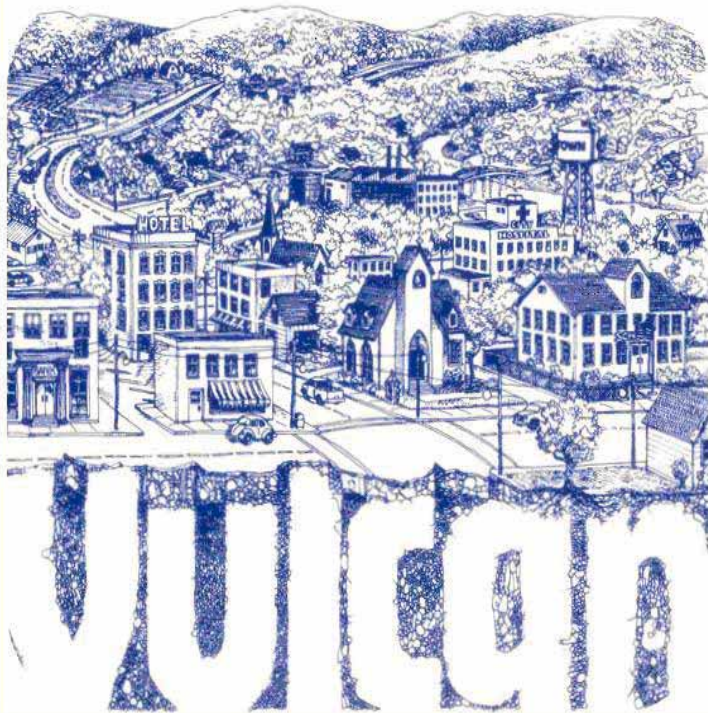
Dr. Miles O. Hayes is a coastal geomorphologist and sedimentologist with 50 years of research experience. He has authored more than 250 articles and reports and three books on a range of topics relating to tidal hydraulics, river morphology and processes, beach erosion, barrier island morphology, oil pollution, and petroleum exploration.

Hayes' teaching experience includes a range of both undergraduate and graduate courses while a Professor at the Universities of Massachusetts and South Carolina. Seventy-two graduate students received their degrees under his supervision, most of whom are now leaders in their respective academic, government and industry positions. He is presently chairman of the Board of Research Planning, Inc. (RPI), a science technology company located in Columbia, S.C.

Dr. Jacqueline Michel is an internationally recognized expert in oil and hazardous materials spill response and assessment with a primary focus in the areas

(Continued on page 20)

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AEG 2010 Charleston



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

AEG•2010

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53rd ANNUAL MEETING

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

- Geologic education
- Professional registration

◆ 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
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- 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

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 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.



- ◆ 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

(Continued from page 17)

of oil fates and effects, non-floating oils, shoreline cleanup, alternative response technologies and natural resource damage assessment. She has participated in research projects in 33 countries.

Since 1982, she has been a member of the Scientific Support Team to the U.S. Coast Guard provided by the National Oceanic and Atmospheric Administration (NOAA). Under this role, she is on 24-hour call and provides technical support for an average of 50 spill events per year. She leads shoreline assessment teams and assists in selecting cleanup methods to minimize the environmental impacts of the spill.

She has written more than 150 manuals, reports, and scientific papers on coastal resource impacts, mapping and protection. As a member of the Ocean Studies Board at the National Academy of Sciences for four years, she served on four National Research Council committees (chairing two), and is a Lifetime Associate of the National Academies. One of the original founders of RPI, which started in 1977, she now serves as the company president.

CAROLINAS SECTION ACTIVITIES SINCE THE MID-YEAR BOARD MEETING

Our section has been really busy—here is a partial list of activities we have hosted since the Mid-Year Board meeting in May, 2009. This report will be presented to the AEG Board at the 2009 General Meeting in Tahoe in September.

We hosted a two-day seminar titled “Principles of Soil and Groundwater Geochemistry” on May 4 and 5 in Research Triangle Park, North Carolina. Presenter was Bill Deutsch of the Pacific Northwest National Laboratory in Seattle. Seminar was organized by Gary Rogers, Dave Dunklee and Rick Kolb of the Carolinas Section. Attendance was 97 members and non-members. Income was \$25,550, comprised of \$2,350 from seven sponsors, 82 attendees @ \$250, 12 attendees @ \$150 (special public-sector employees, and they really appreciated it) and 3 attendees @ \$300 (price on the day of the seminar). Total expenses were \$24,632, comprised of \$16,663 for the hotel venue, \$6,390 for the speaker, \$1,559 for the course notebooks, and \$20 for the name tags. Profit was ~\$900.

(Continued on page 21)



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(Continued from page 20)

We learned a lot putting on this seminar and believe we could make a larger profit at the next one. Our philosophy was not to make a lot of money, but not to lose any, either. We succeeded, and the course evaluations were very positive. We are considering Bill for a return visit to present Part II of this seminar at the 2010 annual meeting (and maybe a replay of the first part as well).

Our section has begun negotiations with Redox Tech to co-host the Second In-Situ Soil and Groundwater Remediation Conference, to be held in Raleigh in February 2010. The first conference in February 2008 and was sold out, with 200 attending. This conference will bring publicity to AEG, although we don't expect to play as large a role as when we are the sole host of a conference/seminar.

Our section held a joint meeting on June 26 with the Western North Carolina Branch of ASCE in Asheville, which attracted 50 members of AEG and ASCE as well as non-members. Typically our section holds three meetings a year, one each quarter except the summer. With the success of this meeting, we plan to add Asheville to the regular meeting rotation and hold four section meetings per year. We have made plans to hold a fifth meeting in South Carolina every year (starting this year, planned for October 15).

Our section set up and hosted the AEG booth at

the American Rock Mechanics Association meeting in Asheville that followed our June section meeting. President Molinari attended the first day of that meeting.

During our recent election, our section adopted new bylaws, using the template developed by the Governance Committee in 2008. The new bylaws replace those from the 1980's.

Gary Rogers and Rick Kolb have been holding regular conference calls with a few members of the Southeastern Section in an effort to revive that section. We have also made plans with these members to contact college/universities in Northern Georgia in an effort to stimulate interest in AEG. We held a call with one student member in the master's program at the University of Georgia who is spreading the word there, and who is gauging interest in a VP visit. We are planning a fall section meeting, and hope to have the AEG President and the Jahns Lecturer as speakers at section meetings planned for the first and second quarters next year, which we will tag onto their hoped-for visits to the Carolinas Section.

If all goes as planned, the application for the student chapter at North Carolina State University will be approved at the board meeting in Lake Tahoe. Rick Kolb met with Drew Coleman of UNC-Chapel Hill and started start discussions on AEG events for the new academic year, and has started similar discussions with the student chapter at UNC-Charlotte.



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ANNOUNCEMENTS

A&D Environmental Services, Inc. Announces Paul Taveira as CEO

A&D Environmental Services, a leading provider of environmental and industrial field services, is pleased to introduce Paul Taveira as the company's Chief Executive Officer. Mr. Taveira brings a wealth of knowledge and expertise gained from his 22 years industry experience of providing comprehensive environmental and industrial services across a wide range of markets including industrial and commercial operations, government agencies, and environmental engineering and consulting groups.

Previously, Mr. Taveira was President of a \$300 million environmental services company with 40 facilities and more than 2,000 employees throughout North America. His unwavering dedication to servicing client's needs and acute attention to detail earned him a stellar reputation with his clients, including many Fortune 100 companies. Eric McManus, President and COO of A&D, states "Paul 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 excited to have Paul join our team".

Mr. Taveira joins an established team of professionals that has provided high quality, cost effective solutions to our clients' environmental and industrial needs since A&D's inception in 1992. A&D Environmental uses highly trained employees, advanced technology, stringent safety procedures and competitive pricing to consistently deliver high quality environmental & industrial services. Mr. Taveira can be reached at ptaveira@adenviro.com and 800-434-7750.

A&D Environmental is a full-service environmental and industrial field services provider offering a wide range of services throughout the Southeastern United States. More information can be found at www.adenviro.com.

A&D Environmental Services, Inc. Welcomes Bobby Watts - Technical Sales Specialist

A&D Environmental Services, Inc., welcomes Bobby Watts to our Greenville, SC operations. His background includes 29 years of industry sales experience across a wide range of markets including private industry, municipalities, environmental engineering and consulting groups.

Mr. Watts joins an established team of professionals that has provided efficient and cost effective solutions to client's environmental needs since the company's inception in 1992. A&D Environmental 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. Paul Taveira, CEO of A&D Environmental, states "Bobby 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 Bobby join our team".

Bobby can be reached at bwatts@adenviro.com and 864-505-5806. More information can be found at www.adenviro.com.



Scott Pearce
Vice President


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Charlotte-based Enviro-Equipment, Inc. Receives MET Labs Certification for Control Panel Shop

Enviro-Equipment, Inc., (EEI) a manufacturer of new and refurbished used remediation equipment control panels, recently announced that its control panel shop received UL 508A and UL 698A certification from Met Labs. The two certifications allow the company to build custom panels to whatever specification customers want – and certify to UL standards that they're safe from electrical shock and fire hazard.

"Getting these two certifications is very important for our company," reports EEI Vice President Brian Chew. "Previous to becoming certified, we would have to have Met Labs come out and certify each panel as it was built – which added thousands of dollars to the cost of the panel. Now we can build control panels to UL standards, inspect them, and ship them out with the MET approved sticker. This saves us and our customers a significant amount of time and money."

Typically, when a control panel is sent to a job site, the customer or end-user has to apply for power from the local electric company. Before the electrical service is connected, a utility inspector must certify that the system meets NEC standards. Having the MET sticker right on

the control panel means customers or end-users can eliminate delays at the job site.

EEI builds new and used remediation systems, control panels for SVE Systems, Air Sparge systems, Pump and Treat Systems, and many other applications. The company uses high-quality components from manufacturers such as Cutler Hammer (EATON), Hoffman, IDEC, and Allen Bradley.

A North Carolina certified "Woman Owned Business Enterprise," EEI is located at 11180 Downs Road in Charlotte, North Carolina. EEI's remediation facility is located in Pineville (South Charlotte), NC. To learn more, visit the company's Website <http://www.enviroequipment.com> or call 866-655-8267. EEI is a long-time AEG Carolinas Platinum sponsor.

EEI sponsored the GWPNC meeting on Harris Blvd at the Hickory Tavern in Charlotte on Sept. 10, 2009. Since this is before GeoNews comes out, photos and/or videos will also be on our website and blog for that meeting. [www.http://www.enviroequipment.com/newsletter/tradeshows.html](http://www.enviroequipment.com/newsletter/tradeshows.html)

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SPONSORS, VOLUNTEERS NEEDED FOR AGI EARTH SCIENCE KIT GIVEAWAY

AEG Carolinas invites you to help sponsor the American Geological Institute (AGI) Earth Science Tool Kit Giveaway, to be held at the Annual Professional Development Institute of the North Carolina Science Teachers Association on November 19-20, 2009 in Greensboro. The theme for this year's institute is Green Science: North Carolina's Future for a Sustainable World. The AGI Earth Science Tool Kits are geared toward giving science teachers resources to teach earth science to school children from kindergarten through high school, and to encourage students to think about the world around them.

Earth Science Week is an annual event held the second week of October to promote an understanding and appreciation of the earth sciences. It is organized annually by AGI with support from a number of other geoscience organizations, including the U.S. Geological Survey, NASA, National Park Service, and the American Association of Petroleum Geologists Foundation. Although Earth Science Week is in October, the NCSTA meeting is an outstanding venue to distribute these great kits to science teachers from North Carolina, so this is our Earth Science Week project for this year.

The 2009 Earth Science Week Toolkit contains a 12-month school-activity calendar and classroom poster provided by AGI, its Member Societies and other organizations. Along with these traditional Earth Science Week publications, this year's Toolkit features a variety of educational climate resources from the U.S. Geological Survey (USGS), NASA, and the National Oceanic and Atmospheric Administration (NOAA). A report on the "Ecological Impacts of Climate Change" and a new brochure outlining principles for Earth Science literacy are also included. Multimedia features this year include NASA's "Dynamic EARTH" DVD-ROM and a CD-ROM on GIS technology from ESRI. Additional informational materials within the kits include a National Park Service poster highlighting the nation's glaciers and literature on

the National Wildlife Refuge System.

Like years past, the 2009 Toolkit contains a genuine field notebook from Rite in the Rain. These items and much more make the Earth Science Week Tool Kit ideal for engaging students and general public to explore the geosciences.

The NSTA has been around since 1944, and has a membership of 60,000, primarily science teachers, supervisors, business and industry professionals, and others involved in science education. Their mission is to promote excellence and innovation in teaching science. Their programs include conducting conferences with science teaching workshops; presenting cash awards and school supplies to science teachers and students; and advocating for science and science teachers. Their website is www.nsta.org.

The AGI is a nonprofit federation of 45 geoscientific and professional associations (including AEG) 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. Learn more at <http://www.agiweb.org>.

Please help sponsor this great resource for our teachers. You can donate enough for 25 kits (\$165), for one kit (\$6.60), or whatever you or your organization can afford. Each kit that you donate will have a label with your name or your company's name on it, and the teachers will let their students know just how much you are appreciated. We need the donations before we order the kits, so please let us know soon if you will be a sponsor. Contact Jane Gill-Shaler, AEG Carolinas Newsletter Editor, at janehgill@aol.com, or (336) 687-6144.

Thank you!!!



Drew Baird, P.G.
Southeast District Manager

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SCAEP TALKS APPROVED FOR CONTINUING EDUCATION UNITS

Email from Ron Herrygers, SCAEP President

The South Carolina Association of Environmental Professionals (SCAEP) just received word from Lenora Addison-Miles with the South Carolina Geology Board that all of the talks presented at SCAEP's meetings so far in 2009 (including the January, February, March, April & May meetings) have all been approved for 1 SC PG CEU each. They will be submitting the remaining 2009 talks for review & approval as SC PG CEUs late in the year. Meetings are currently scheduled for September 17th, October 1st and October 15th.

SCAEP is a non-profit organization founded in 1992, and consists of members from a variety of disciplines including earth sciences, engineering, law, management and other environmental related areas. The Association meets once each month, usually the THIRD Thursday, from January through October. Meeting schedules include a brief business section prepared presentation by an expert on a topic related to members interest, followed by a discussion and a social session. This gives a good opportunity for the members to learn new techniques, participate in active discussions and also interact in an informal basis.

SCAEP also organizes periodic field trips in order to learn from the real field situations. Membership

is open to everyone who is actively involved in any aspect of environmental work.

For more information, contact Ronald F. Herrygers, SCAEP President, at (803)951-8947



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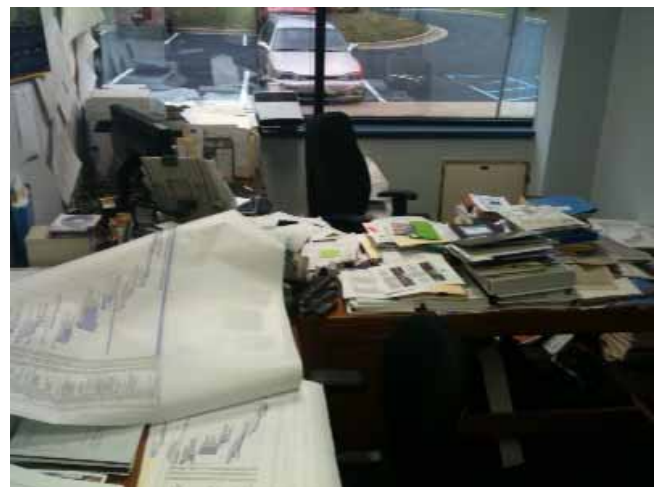
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GUESS THIS MESS

So, Guess whose messy, busy office this is? No fair if it is YOUR office. All of these were considered for the cover of this quarter's newsletter. The owners are very happy they have interesting and complicated, good jobs, believe me! No prizes but the satisfaction of having figured it out.



CALENDAR OF EVENTS - 2009

Geological Events in the Carolinas

Courtesy of AEG Carolinas Section – www.aegcarolinas.org. Last updated September 18, 2009

Send updates/corrections to Ben Draper, Benjamin_Draper@golder.com

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

Date: September 21-26, 2009

Event: **AEG Annual Meeting**

Location: South Lake Tahoe, California

Contact: www.aegweb.org

Est PDH: Unknown

Date: September 24, 2009

Event: **ASHE & ASCE Joint Meeting**

Location: Raleigh, NC

Contact: mlcole@rkkengineers.com

Est PDH: 1

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>

Est PDH: 1

Date: October 10, 2009

Event: **2009 AEG Carolinas Section Field Trip**

Location: Durham, North Carolina

Contact: bdraeper@golder.com

Est PDH: Unknown, but approved

Date: October 11-17, 2009

Event: **Earth Science Week**

Location: **Everywhere**

Date: October 14-15, 2009

Event: **2009 Rare Plants and Natural Communities Workshop**

Location: Emerald Isle, NC

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

Est PDH: 1

Date: October 18-21, 2009

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

Location: Portland, Oregon

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

Est PDH: 1

Date: October 15, 2009, 6:30pm

Event: **SCAEP/AEG Joint Meeting**

A Coast for All Seasons; A Naturalist's Guide to the Coast of South Carolina

Location: RPI at 1121 Park Street in Columbia, SC

Contact: Raymond Knox, rknnox@schnabel-eng.com

Est PDH: 1

Date: October 22, 2009 SCAEP/AEG Joint Meeting

Event: **AEG Carolina Section Meeting– Bonnie S. Ware, NCDENR**

Location: Greensboro, NC

Contact: clkromm@mactec.com

Est PDH: 1

Date: November 19-20, 2009 NCSTA Conference

Event: **North Carolina Science Teachers Association Conference AGI Earth Science Kit and NCAA Rock Sample Giveaway**

Location: Koury Convention Center, Greensboro, NC

Contact: JaneHGill@aol.com (for AEG Carolinas donations and volunteers)

Est PDH: Unknown

Date: Thursday, December 3, 2009 Ground Water Professionals of North Carolina

Event: **GWPNC Meeting**

Location: NCSU University Club in Raleigh, NC

Contact: Nicole Manning: nicole@choice-enviro.com

Est PDH: 1

Date: January 28, 2010

Event: **AEG Carolina Section Meeting – Charlotte, NC**

Location: Charlotte, NC

Contact: RAKOLB@mactec.com

Est PDH: 1

Date: February 23-24, 2010

Event: **Southeastern In Situ Soil & Groundwater Remediation Conference**

Location: Raleigh, NC

Contact: jhaselow@redox-tech.com

Est PDH: Unknown

Date: March 13-16, 2010

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

Location: Baltimore, MD

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

Est PDH: Unknown



*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:	\$25 (the cost of the guide book & Lunch)
Bring:	Water, sturdy shoes or hiking boots
Reservations:	Please email Benjamin Draper at bdraper@golder.com to reserve your spot. Please mail a check for \$25 to Benjamin Draper for receipt by Monday, October 5 so we know how many guide books to order.

The 39th Annual Virginia Geological Field Conference**Geology of Shenandoah National Park region, Virginia**

October 2-3, 2009

Big Meadows Byrd Visitor Center, Shenandoah National Park

Scott Southworth, Bill Burton

U.S. Geological Survey

Chuck Bailey, Greg Hancock

College of William & Mary

L. Scott Eaton

James Madison University

Shenandoah National Park lies astride the Blue Ridge Mountains in north-central Virginia. Rocks in the region include Grenvillian basement rocks, Neoproterozoic sedimentary and volcanic rocks, and early Cambrian siliciclastics. The structural geometry of the Blue Ridge is the product of late Neoproterozoic rifting, Paleozoic contractional deformation, and Mesozoic extension. The modern landscape developed during the Cenozoic as differential erosion at a regional scale generated the highlands. Both Quaternary and active surficial processes have constructed distinct landforms.

In the past decade there has been plethora of geological research in the Park and new geologic maps of the region have been recently completed. The 2009 Virginia Geological Field Conference will highlight new research, visiting exposures along and near the Skyline Drive. The focus of the trip will be broad, encompassing bedrock and structural geology as well as surficial geology and rates of erosion at local and regional scales.

The VGFC will be based at Big Meadows (Mile Post 51). A pre-trip reception with introductory talks will be held at the Byrd Visitors Center on Friday evening, October 2nd, at 7:00 p.m. The field trip will leave from the parking lot at the Byrd Visitors Center at 8:00 a.m. on Saturday and return at about 5:00 p.m. Transportation, lunch, and guidebook will be provided. There will be a few short (approximately one mile roundtrip) hikes on trails during the trip; participants should be prepared to walk over rugged terrain.

Due to logistics in the park, two 54-passenger buses will convey the field trip participants. **No other vehicles** will be permitted on the field trip. Given the space constraint, attendance will be limited to 100 participants. Register early to ensure your place at the Conference.

Questions: contact C. M. Bailey, 757-221-2445, cmbail@wm.edu

Names(s) _____	<u>Registration (by Sept. 16th 2009)</u>
Address _____	Student (\$20) _____
City, State, Zip _____	Regular (\$45) _____
Telephone _____	<u>Late Registration (after Sept. 16th)</u>
e-mail _____	Student (\$30) _____
	Regular (\$55) _____
	Total submitted _____

Registration deadline is September 16, 2009

Make checks payable to Virginia Geological Field Conference and send to:

Virginia Geological Field Conference
Virginia Division of Geology and Mineral Resources
900 Natural Resources Drive, Suite 500
Charlottesville, Virginia 22903

**CAROLINA GEOLOGICAL SOCIETY**

www.carolinageologicalsociety.org

2009 Field Trip

Columbia, South Carolina

Leaders – Mervin J. Bartholomew

– Mark A. Evans

– Fredrick J. Rich

**CAROLINA GEOLOGICAL SOCIETY 2009
FIELD TRIP ANNOUNCEMENT**

Columbia, South Carolina

November 6, 7, and 8, 2009

**Rifting and Drifting in South Carolina:
Fracture History in Alleghanian Granites and Coastal Plain Strata****Headquarters Hotel: Clarion Hotel** -1615 Gervais Street, Columbia, SC (803) 771-8711

(Located between Pickens and Henderson streets; Park in rear and enter through Ballroom to Lobby)

From NW or SE: Take I-26 to I-126 into Columbia; Bear right on Huger Street; Turn left on Gervais Street

From West: Take I-20 to I-26S to I-126

From North (I-77) or East (I-20): Take 277 which becomes Bull Street; Turn right on Gervais Street

*You are responsible for making your own hotel reservations.***NOTE: Mention Carolina Geological Society or CGS when making reservations.** CGS rate is \$92/night + tax for a king/double suite.

A block of 50 rooms is reserved.

Room reservation deadline is October 23, 2009.**Registration Fee:** Registration fee for the Saturday trip covers bus transportation, lunch, and morning and afternoon coffee/snack breaks. Registration fee for Sunday covers bus transportation and morning coffee break. **PLEASE REGISTER EARLY! REGISTRATION DEADLINE IS OCTOBER 23. THERE WILL BE NO ONSITE REGISTRATION.****Welcoming Party: Clarion Hotel**, Friday, November 6, 7–10 pm.**Banquet and Annual Business Meeting: Clarion Hotel**, Saturday, November 7, 7:30 pm.Business meeting will include reports by Secretary-Treasurer, ratification of reports by the membership, report of the Nominating Committee, and election of officers. **SPACE WILL BE LIMITED.****Field Trip Transportation:** Transportation for both field trip days will be by chartered buses. Because of limited parking, no other vehicles will be permitted to transport participants on either day, and space on buses will be limited. Each day's trip will depart at 8 am and end at the Clarion Hotel.**Field Trip:** The 2009 Carolina Geological Society Field Trip will focus on the preliminary results of fracture studies in Alleghanian granites and Mesozoic-Tertiary strata of the Atlantic Coastal Plain. Fracture sets provide a way of determining how the regional stress field changed during the Mesozoic and Cenozoic. Fluid Inclusions in veins record T&P changes as the Alleghanian granites were uplifted and exhumed during the Mesozoic. Fracture sets record a sequence of events that include failed and successful rifting; diabase dike emplacement; and Late Eocene and Late Miocene uplifts.

Registration Form 2009 Carolina Geological Society Annual Meeting and Field Trip

Rifting and Drifting in South Carolina:
Fracture History in Alleghanian Granites and Coastal Plain Strata

November 6-8, 2009

Note: Registration Deadline October 23, 2009

(Register Early. No On-Site Registration)

Note: Cancellation Deadline for Refund is October 23, 2009

Name(s) _____

Name on Badge _____

Address _____

& _____

Affiliation _____

Phone _____

E-Mail _____

Field Trip Registration, Saturday, Nov. 4

Non-student \$70 \$

Student \$25 \$

Lunch- Circle one: meat vegetarian

Field Trip Registration, Sunday Nov. 5

Non-student \$35 \$

Student \$15 \$

Banquet, Saturday, Nov. 4 (limited space!)

Non-student \$40 \$

Student \$20 \$

Circle one: Fish Steak Chicken Vegetarian

Guidebook

Non-student \$25 \$

Student \$15 \$

Total Charges \$ _____

HARD HATS, SAFETY GLASSES AND STEEL-TOED BOOTS ARE REQUIRED

Make Checks Payable to: CGS-2009 Mail Check and Form to:

CGS-2009

C/O Mervin J. Bartholomew

Department of Earth Sciences

111 Johnson Hall, 488 Patterson Street

University of Memphis

Memphis, TN 38152

For more information about registration or field trip:

Jerry Bartholomew (901) 678-4536 or jbrthlm1@memphis.edu



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, 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, 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, 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
 _____ GeoNews Newsletter Sponsor Only (see above)

Name: _____

Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____

Contact Person: _____

Cell: _____

Email: _____

Website URL: _____

Date of Payment: _____

Something about your company _____

Please enclose a business card or email ad in jpg, pdf, or doc To Jane Gill-Shaler at 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

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. Jahns 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.

Check Us Out
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: _____

Home Phone: _____

DESIRED CLASS OF MEMBERSHIP: _____ ANNUAL DUES AMOUNT: _____

**STUDENTS!
SAVE \$25!
AEG CAROLINAS
SECTION WILL
PAY FOR YOUR
MEMBERSHIP!**

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:
Association of Environmental & Engineering Geologists, PO Box 460518, Denver, CO 80246
Phone: 303-757-2926 FAX: 303-757-2960 AEG Web: www.aegweb.org

Thank You, AEG Carolinas Sponsors!!

PLATINUM

Enviro-Equipment, Inc., Denise Chew, President, 888-274-8929, www.enviro-equipment.com. We are a Woman-Owned Small Business, staffed by experienced professionals, committed to providing quality environmental equipment and products for rent or sale at reasonable rates. EEI is a stocking distributor of numerous environmental products for detection of air, water, and soil contamination.

Geobrudd North America, Frank Amend, (252) 937-2552, www.geobrudd.com. GeoBrugg North America is a premier supplier of engineered rockfall protection and slope stabilization systems. Our wirework-based, unobtrusive, and ecology-friendly systems blend well with the natural surroundings. Well-proven anti-corrosion processes permit achieving a useful life up to 100 years and our installed systems require virtually no maintenance.

In-Situ, Inc., Jason Evans, (800) 446-7488 ext. 587, www.in-situ.com. In-Situ® Inc. designs, manufactures, distributes, and rents environmental equipment for monitoring the quantity and quality of groundwater and surface water. In-Situ Inc.'s headquarters are located at the foot of the Rocky Mountains in Fort Collins, Colorado, USA. In-Situ offers world-class technical support 24 hours a day, 7 days a week through its global network of regional offices and distributors.

Pine Environmental, Inc., Paul Federline, (866) 646-7463, pfederline@pine-environmental.com. Pine is the leading provider of rental equipment in the nation with the latest instruments available. Pine Environmental Services, Inc. takes pride in their unprecedented customer support and competitive pricing. Extended hours of operation and after-hour emergency support are on hand.

Vulcan Materials Company, Jim Stroud, Stroudj@VMCMAIL.com, 336-767-4600, www.vulcanmaterials.com. Vulcan is the nation's leading producer of crushed stone.

Zebra Environmental, Inc., Mike Early, MikeE@zebraenv.com, (919) 424-6122, www.teamzebra.com. ZEBRA is a specialized environmental contracting company dedicated to providing high quality subsurface sampling, installation, injection and data collection services to engineering and consulting firms. Since 1992, ZEBRA has earned a solid reputation as the most experienced, best equipped and most reliable direct push/probing service provider on the East Coast.

GOLD

American Environmental Drilling, Inc., Guy Veni, Guy@aedi.biz, (910) 944-3140, (800) 779-8854, <http://aedi.biz>. American Environmental Drilling, Inc. provides competitive full drilling services to North Carolina, South Carolina, and Virginia. Safety is a major factor in what we do and our drilling teams are fully trained and meet OSHA standards. We pride ourselves in being able to provide safe, reliable, fast, and efficient services. Our strong relationships with our clients allow us to understand their needs and be proactive in meeting their requirements.

EOS Remediation, Gary Birk, gbirk@eosremediation.com, (919) 873-2204, www.eosremediation.com. EOS Remediation leads in producing scientifically-tested, field-proven products for Enhanced Anaerobic Bioremediation,

Enhanced Aerobic Bioremediation and Bioaugmentation. EOS Remediation's products are specifically developed and designed for cost-effective, in situ treatment of groundwater.

LandProbe, LLC, Joy Stugg, joy@landprobe.com, <http://www.landprobe.com>, (888) 349-0176. We are a full service environmental and geotechnical drilling contractor with locations in Greenville, SC, Monroe, GA, and Asheville, NC, – serving clients throughout the southeastern United States.

Nicholson Construction, Tara Hoover, 412 221 4500, thoover@nicholsonconstruction.com, <http://www.nicholsonconstruction.com>. Nicholson Construction Company has been setting the industry standard for performance and technical innovation in geotechnical construction. As the North American business unit of the Soltaniche Bachy Group, Nicholson is part of a global network of unparalleled geotechnical resources and expertise.

Schnabel Engineering, 336 274 9456, Robert Cannon, rcannon@schnabel-eng.com, Gary.Rogers@grogers@schnabel-eng.com, <http://www.schnabel-eng.com>. Schnabel provides geophysical surveys, dam design and rehabilitation, geotechnical engineering, and environmental services.

SILVER

A & D Environmental Services, 336 434-7750, Scott Pearce, Vice President, spearce@adenviro.com, <http://adenviro.com/index.html>. A&D Environmental Services, Inc. provides turn-key solutions to our client's environmental and industrial concerns.

AE Drilling Services, Inc., 864 288 1986, www.aedrilling.com. AE Drilling Services LLC performs geotechnical, environmental, mineral exploration, and water supply drilling services throughout the southeastern U.S. Services include ATV auger, coring, air & mud rotary drilling, probing & reagent injection, inclined drilling, deep & large diameter mud & air rotary drilling, & well rehabilitation.

Bore & Core, Inc., Buck Demarest & Terri Rogers, (919) 872-9551, boreandcore@bellsouth.net. Bore & Core was founded in 1981 in Raleigh, NC. We are dedicated to providing high quality geotechnical and environmental drilling services to our clients. Our highly trained & experienced drilling team makes us the company of choice for some of the most highly technical & sensitive jobs, not only in the Triangle of NC, but the southeastern United States.

Choice Environmental Services, 919-369-1001, Nicole Manning, President, www.choice-enviro.com. Rentals and Supply Sales of water quality, water sampling, air monitoring, and soil sampling equipment and supplies.

ENCO Laboratories, Inc., 919-677-1669, <http://www.encolabs.com>. A network of environmental laboratories that has been providing analytical testing services since 1988.

Environmental Products and Services of Vermont, Inc., 919-852-3595, Peter Marotta, pmarotta@epsofvermont.com, www.epsofvermont.com. EP&S is a comprehensive environmental and industrial contractor providing a wide range of services from Emergency Spill Response, Vacuum Truck Services, Soft Utility Excavations, Tank Removal and Cleaning, Industrial Cleaning and Maintenance Services,

(Continued on page 36)

Thank You, AEG Carolinas Sponsors!!

(Continued from page 35)

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Garco, Inc., 336 683-0911. Al King, alk@egarco.com, <http://www.egarco.com>. GARCO, Inc. provides environmental, industrial, waste transportation, disposal and recycling services to industrial and consulting clientele throughout the Southeast.

Geotech Environmental Equipment, Inc. -1-800-833-7958.

Scot Forest, scotf@geotechenv.com, <http://www.geotechenv.com/>. Geotech manufactures and distributes sampling, filtration, analytical and remediation products for the ground and surface water industry.

Golder Associates 336 852 4903 rachel_kirkman@golder.com, <http://www.golder.com>. Golder provides ground engineering and environmental services worldwide to various industries, natural resource providers and government.

Joyce Engineering, Inc. 336-323-0092 Hannu Kemppinen, kemppinenhc@bellsouth.net. Greensboro office. Joyce Engineering is a full-service solid waste management consulting firm dedicated solely to the solid waste industry. throughout the Mid-Atlantic and Southeastern United States.

KB Labs 352 367 0073. Todd Romero, toddr@kbmobilelabs.com. We provide SCDHEC, NCDENR, and NELAP certified mobile laboratory services

and membrane interface probe (MIP) direct-sensing technology. Our mobile labs can analyze water, soil, and soil gas samples onsite for volatiles, pesticides, or PCBs.

MACTEC Engineering and Consulting. 919-831-8054. Rick Kolb, rakolb@mactec.com; www.mactec.com. MACTEC is headquartered in Atlanta and is a leading consulting firm that provides engineering, environmental, and construction services. MACTEC has over 3,000 employees in 80 U.S. locations and has offices in Asheville, Charlotte, Greensboro, Research Triangle Park, Raleigh and Wilmington, North Carolina and in Greenville and Columbia, South Carolina.

Parratt-Wolff, Inc. 800 627-7920, Robert “Butch” Stevens, bstevens@pwinc.com. Groundwater Monitoring and Sub-surface Exploration Services.

Regenesis - 864-240-9181 or 864-884-4346 Drew Baird, dbaird@regenesis.com. Regenesis develops, manufactures, and markets innovative technologies to clean up the environment in a way that conserves our customers' time and money. We are located in Greenville, SC.

SAEDACCO - 803-548-2180 www.saedacco.com. SAE-DACCO is a southeast regional environmental services company headquartered in Fort Mill, SC. SAEDACCO is structured to provide turnkey environmental services including geoprobe, drilling, UST removals, remediation system installations and remediation system fabrication.

SGS Environmental 910-350-1903. Chanhuan Chanthaphone, Chanhuan.chanthaphone@sgs.com. Present in more than 40 countries with 91 offices and 52 laboratories, SGS Group has the capability to meet the environmental needs of international, as well as domestic industries, service organi-

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