

GEONews

Newsletter of the Association of Environmental & Engineering Geologists, Carolinas Chapter
2009, 2011, 2013, and 2016 AEG Chapter of the Year

SUMMER 2017

IN THIS ISSUE

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Years..... 7
- Past Chairs Take Us Back in the Day 12
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SAVE THE DATE

Saturday, August 12, 2017 40th Anniversary
Party, Charlotte, NC

October 5-6, 2017 Vapor Intrusion: The Con-
ference II, Charlotte, NC

October 21, 2017 Emerald Hollow Mine,
Hiddenite, NC

GEONEWS SUMMER 2017
Issue Date: December 21, 2016
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Thanks to our Sponsors!

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

Deadlines for submittal to AEG Carolinas 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 Sept 21
 Winter – deadline December 1, issue date December 21

Deadlines for submittal for the National AEG News:

March issue – January 15
 June issue – April 15
 September issue – July 15
 December issue – October 15

AEG Carolinas Chapter**Current Officers and Contacts**

Chair	Madeline German, P.G. madeline@smithgardnerinc.com
Vice Chair	Susan Kelly, P.E., L.G. susan.kelly@amectw.com
Treasurer	Eric Cross, P.G. eric@pyramidenvironmental.com
Secretary	Rebecca Deal RDeal@harthickman.com
Past Chair	Alex Rutledge, P.G., P.E. frutledge@schnabel-eng.com
Membership Chair	Cortney Cameron Cortney.cameron@gmail.com
Student Liaison	Rick Kolb, P.G. rick.kolb1@gmail.com
Social Committee Chair	Adam Phillips aphillips@prismlabs.com
Field Trip Chair	Susan Buchanan, P.G. sbuchanan@schnabel-eng.com
Sponsor Chair	Walt Plekan, P.G. Walt.plekan@aecom.com
GeoNews Editor	Jennifer B. Thomas, P.G. jen@jennotecllc.com
Advisor	Jennifer Bauer, P.G. jennbbauer@gmail.com
Advisor	Rick Kolb, P.G. rick.kolb1@gmail.com

Regional Director Paul Weaver, P.G.
pweaver@espassociates.com

AEG Carolinas Chapter Website www.aegcarolinas.org

AEG National Website www.aegweb.org

Cover: (Mountain Xpress) North Carolina emerald sample in matrix on display at the Smithsonian Institute

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MESSAGE FROM THE CHAIR

By Madeline German, P.G., Carolinas Chapter Chair

Greetings Carolinas Chapter!

AEG Carolinas is celebrating 40 years as an organization this year. We have been rocking 2017 with two fantastic Chapter meetings and two amazing field trips, and there is so much more to come. In the spring issue we presented part of the fantastic history of our Chapter written by **Rick Kolb** and **Paul Weaver**. Part two is continued in this issue starting on page 12.

I am also excited to announce our 2017 Carolinas Scholarship winner: Ms. Savannah Bryant from NC State. Savannah will be awarded \$1500 to help fund her Field Camp. Congratulations!

The 2017 Jahns Lecturer, **Dr. Scott Anderson, P.E., P.G.**, visited the Carolinas the first week of April. He gave well attended presentations at College of Charleston, UNC Wilmington, Wake Tech, NCSU and UNC Chapel Hill. He also presented “Solid as a Rock: How Engineering Geology Relates to Transportation Asset Management” at our Raleigh Chapter Meeting, Wednesday April 5th. In this talk Dr. Anderson discussed transportation infrastructure’s expiring life and the risk-based strategies for asset management such as bridges, pavement, subgrade, embankments, walls and slopes, as well as looking at what performance requirements are expected, and what is actually needed.

The Raleigh Chapter meeting was a joint meeting with the North Carolina Eastern Branch of ASCE and was well attended by approximately 60 professionals and students at 1705 Prime. **Contaminant Control Inc.** and **Pace Analytical Laboratories** sponsored drink tickets for this meeting and **Regenesis** had an exhibitor table. Also at this meeting a 50/50 raffle was held to raise money for the Carolinas Scholarship fund. \$280 was raised at the meeting because **Mark Vestal** won the raffle and generously donated his winnings to the scholarship fund; additionally **Jane Gill-Shaler** matched the donation. Well done everyone.

We had a sold-out all age’s field trip at the Raleigh Museum of Natural Science on March 25th. Participants received a behind the scenes tour of the Geology Collection and the Paleontology Research Laboratory at the North Carolina Museum of Natural Sciences. Attendees earned two South Carolina PDH credits for attending.

Our spring field trip on April 22, 2017 was a geological hike along the Haw River in Chatham County, NC. We hiked two separate stretches of the Haw River on either side of HWY 64 within the Lower Haw River State Natural Area. Participants observed the results of detailed geologic mapping by the NC Geological Survey in Chatham County and interpretations of various outcrops and land-

forms along the river. This portion of the Haw River is located within the Hyco Formation of the Carolina terrane. We began the morning with a hike along the river northwest of the Highway 64 Bridge. Along this section we visited outcrops of metamorphosed dacites, andesites and basalts of the Hyco Formation. After lunch, the hike was on the southeast side of the river (south of Highway 64), where we visited outcrops of dacites and volcano-sedimentary rocks. Lunch was at Carolina Brewery in Pittsboro. Participants earned 5 PDH credits for attending.

On deck we have a trip to the **[Emerald Hollow Mine in Hiddenite, North Carolina](#)** scheduled for **[Saturday, October 21, 2017 from 9:00am to 2:00pm](#)**. The Emerald Hollow Mine in Hiddenite, NC, is the only emerald mine in the United States open to the public for prospecting. The mine has been in business since 1986, there are no caves or tunnels at the mine; all mining is done vertically by digging down into the ground or using sluice buckets filled with dirt. In addition to the mine, the property has two streams that can be panned, sluicing stations, and a lapidary shop, where gemstones are cleaned, cut on site, and made into jewelry. Not only will we be trying to find our own gemstones, but we will be involved in an educational program which is a 3 hour session that includes an earth science lesson, creeking (which is a crowd favorite), sluicing, and surface collecting. Mike Watkins, who will be directing the program, is a geologist and gemologist who is the Lapidary Director at Emerald Hollow Mine, and he will be hosting the earth science lesson of the program. Both NC and SC Continuing Education Credits are to be determined. Sign up on the AEG Carolinas Website, <http://aegcarolinas.org>.

Starting July 1, 2017 North Carolina licensed geologists will be required to earn continuing education credits to maintain their license. AEG presents opportunities at quarterly dinner meetings, classes, conferences and field trips to earn some of these credits. Please be aware of this update to licensure rules and maintain a record of your

(Continued on page 4)



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mark.vestal@cci-env.com

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hours to protect yourself in case of audit. Additional information is presented in the announcement by Rick Kolb on page 24.

SAVE THE DATE: This August AEG Carolinas will be hosting a 40th anniversary celebration on Saturday, August 12th in Charlotte. We are going to have a pig pick'n with all the fixins, some craft beer, music and a variety of activities. Please contact Maddie German (madeline@smithgardnerinc.com) or Beca Deal (rdeal@harthickman.com) to help organize, sponsor or for more details. I am looking forward to celebrating with you all.

Vapor Intrusion: The Conference II is coming to Charlotte, NC October 5th and 6th. The conference program includes speakers from a variety of backgrounds. Regulators, environmental consultants, scientists, researchers, and attorneys from across the country will present the latest technical, regulatory and legal perspectives on VI. The aim of this program is to provide broad coverage of the current state of scientific understanding, state and national regulatory frameworks, and the direction of evolving science and policy efforts to address vapor intrusion. Due to meeting hall size constraints, please register early to ensure you can attend. The 2014 VI Conference held in Raleigh SOLD OUT! Don't be left out of this opportunity to hear from the greatest experts in the field and earn continuing education credits for your license.

The 2018 National Meeting will be held in Colorado Springs September 12-16, 2017. This is a great opportunity to network with colleagues from across the country while earning CEUs in a fantastic location. You can find out more details on <https://www.aegannualmeeting.org/>.

I encourage you all to participate in the election for the 2017-2018 Carolinas board. You can mail or email your response to **Paul Weaver**. Additionally if you have interest in serving in a leadership role within AEG please let me know. There are many opportunities to help and advocate for the profession.

As AEG National progresses through the items relayed in the Needs Assessment, they are establishing small focus groups, with limited time commitments, to concentrate on

issues that will be disbanded once their task is completed. There are currently four areas of focus:


- 1) Increase environmental presence within AEG,
- 2) Appeal to increase student members,
- 3) Disaster planning/response committee, and
- 4) Form new chapters and reactivate old chapters.

If you are interested in becoming more involved with the AEG leadership, the focus groups, or AEG in general, please contact me or other members of the Carolinas Board. We are in need of several people to help fill supporting chapter roles. Professionals, regulators, teachers and students are all encouraged and welcome. I am looking forward to discussing potential volunteer opportunities with our fantastic membership.

If you are not already, please follow AEG on Facebook, Twitter and Linked In.

As always, your board and I look forward to hearing from each of you regarding your suggestions and/or concerns related to our Chapter. We are here to serve the needs of our membership, so your feedback is vital and welcome.

Cheers,



Maddie German, PG
madeline@smithgardnerinc.com
AEG Carolinas Chapter Chair



W. Martin M. Johnson, P.G.
Vice President

Two Unbad Way
Greenville, South Carolina 29607
www.aedrilling.com

Phone: (854) 288-1905
Fax: (854) 288-2272
Cell: (828) 674-9494
mjohnson@aedrilling.com

Editor's Note*By Jennifer Thomas*

After putting together GeoNews since 2012, I have decided that it is time to pass on the editor's duties. Cortney Cameron will be taking over GeoNews and bringing fresh ideas to our publication. As for me, I will continue to serve AEG in a different capacity. I have volunteered to take over as secretary.

In other news, you may notice that the usual information regarding an upcoming meeting is absent. We are currently researching venues in the Asheville area for a meeting in early fall. We hope to have a Friday meeting to allow people to travel and perhaps stay the weekend. We realize that most members don't live close by but love to visit. For those members who do live in western North Carolina (and South Carolina), it gives you a meeting with less travel time. Don't worry, in the meantime, we have lots of upcoming AEG activities! Read on for all the details.

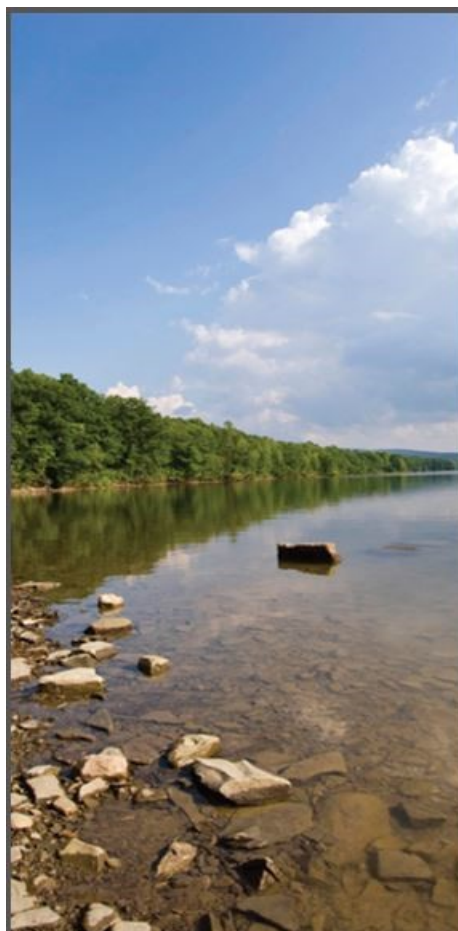
Georamblings*By Charles W. Welby*

We hear much these days about climate warming. Sometimes the comments put blame on the use of petroleum products (i.e. cars), but blame is also put upon our use of coal for heating, etc. But examining the climate of the earth through its history should provide some indications that climate change is also part of the earth's history. So what evidence does the geologic record provide over the long haul?

Well, we know that there have been in the geologic past warmer and colder periods of time on the earth. The evidence comes from the rock records and the fossils contained in the rocks. But also if one investigates matters related to climate changes, we find the relationship of the earth's axis to the sun as the earth rotates about the sun has a role to play in the pattern of climate changes. One of these relationships is explained in the Milankovitch Cycle.

As some may recall, there was a massive volcanic eruption in the Philippine Islands in June 1991 that put a tremendous amount of volcanic ash into the atmosphere and created a massive cooling of the earth's climate for a number of years. So cooling can happen, but also when the cooling

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**AEG Carolinas Section Treasurer's Quarterly Report
January 1 - March 31, 2017**

BALANCE As Of January 1, 2017

Checking Account	\$3,771.54
Savings Account	\$10,701.82
	<u>\$14,473.36</u>

INCOME

Meetings

Winter 2016 Meeting	\$240.00
Charlotte 2017 Meeting	\$1,895.00
April Field Trip	\$830.00

Sponsors

Sponsor Payments	\$5,925.00
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Savings

Transfer from checking to savings	\$5,000.00
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Interest

Savings Account	<u>\$1.88</u>
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SUBTOTAL - INCOME

\$13,891.88

EXPENSES

Banking Fees

Online deposit fees	\$3.00
Card reader fees	\$16.23
Paypal fees	\$152.02

Meeting Expenses

Charlotte meeting - restaurant	\$2,340.57
Museum Field Trip Expenses	\$328.10

Additional Expenses

Sponsor overpayment refund	\$275.00
Visiting Professionals Speaker/Lunch Expenses	\$537.56
Carolina Scholarship Fund Donation	\$200.00

Savings

Transfer from checking to savings	\$5,000.00
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SUBTOTAL - EXPENSES

\$8,852.48

BALANCE As Of March 31, 2017

Checking Account	\$3,809.06
Savings Account	\$15,703.70

TOTAL

\$19,512.76

Mark Your Calendars!
AEG Carolinas

**40th
Anniversary
Social**



**Charlotte, NC
August 12, 2017**



**Food
Music
Craft Beer
Games
Networking**

More details coming soon.



ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS – Carolinas Chapter

Emerald Hollow Mine, Hiddenite, North Carolina

Reservations: You can register and prepay for the field trip by (1) mail (see last pages) or (2) under the News and Events Page of our website at <http://aegcarolinas.org/>. Everyone (including online registers) must fill out the Registration and Liability Waiver Forms to attend the field trip.

THIS FIELD TRIP IS LIMITED TO 50 PARTICIPANTS.

FIELD TRIP RESERVATION DEADLINE: 5PM Monday, October 16, 2017.

Fall Field Trip

Saturday, October 21, 2017, 9:00am to 2:00pm

Meeting Location: 9:00am at Emerald Hollow Mine: 484 Emerald Hollow Mine Drive, Hiddenite, NC

Cost: Members, Public-Sector, Teachers \$50; Non-members \$60; Students with college ID \$30

Field Trip Registration and Waiver: Please fill out, sign, and date forms and send to Sue Buchanan by Monday, October 16, 2017

South Carolina Continuing Education Credits: 4 credits

North Carolina Continuing Education Credits: TBD

Once you are here – you never stop looking for stones.

Emerald Hollow Mine in Hiddenite, NC, is the only emerald mine in the United States open to the public for prospecting. The mine has been in business since 1986, and since then, has been visited by gem-seekers and rock-hounds from all 50 states and several countries. There are no caves or tunnels at the mine, all mining is done vertically by digging down into the ground or using sluice buckets filled with dirt. In addition to the mine, the property has two streams that can be panned, sluicing stations, and a lapidary shop, where gemstones are cleaned, cut on site, and made into jewelry.

Some history about Hiddenite: In the mid-1880s, a mineralogist William Hidden, was sent by Thomas Edison to explore the area for platinum needed for coating the wire filaments in electric light bulbs. William Hidden did not find any platinum, but discovered a fault line where emeralds and sapphires were found lying within 3 feet of each other. William Hidden discovered a neon-green spodumene and named it Hiddenite, as was the town.

Emeralds are not easy to find, it takes hard work and persistence, but usually two to three emeralds are found a week at the mine. About 63 other gemstones and minerals are found here and include hiddenite, topaz, and sapphires.

The largest emerald to come out of the mine weighed 1,868 carats and is on exhibit at New York's American Museum of Natural History. Another great discovery was of a pyramid-shaped smoky quartz



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crystal weighing nearly 300 pounds. And more recently, in 2009, an emerald was found on a farm near the mine that was compared to an emerald worn by Catherine the Great of Russia.

Field Trip Activities

Not only will we be trying to find our own gemstones, but we will be involved in an educational program led by Emerald Hollow Mine staff and geologist, gemologist, and lapidary director Mike Watkins. The educational program is about a 3 to 4 hour session that includes an earth science lesson, creeking (a crowd favorite!), sluicing, and surface collecting. Activities may vary depending on availability and time.

- The **earth science lesson** will cover:
 - a geological explanation of the time frames and occurrences of rock types found at Emerald Hollow;
 - a lesson about stratification seen in the outcroppings at Emerald Hollow;
 - visiting an off-site quarry (about a ¾ mile walk from Emerald Hollow) where we can observe pyroxene shifts and granite formations (pending approval); and
 - visiting a current dig to discuss vein development and the extraction process with the claim's proprietor (this is a private claim, so we won't be collecting here).
- While **creeking**, we'll learn how density, weight, and gravity help explain why gold and gemstones are found in the creek, and then we'll put our knowledge to work by panning and gem-hunting.
- **Sluicing** includes a history lesson on the method and the story of Hiddenite while you sluice a bucket of unprocessed ore taken directly from the mine (with a chance of bearing any of the mine's precious gems!).
- **Surface collecting** explores how erosion exposes gems at the surface while we look for any of the over sixty types of gems and minerals that have been found on the "East Ridge."

Field Trip Logistics

The field trip will begin at 9:30am on at the **Emerald Hollow Mine (484 Emerald Hollow Mine Drive, Hiddenite, NC)**. Parking is available at the mine. AEG will not be supplying bus transportation for this field trip. Attendees are expected to be ready for the tour by **9:00am** so the Emerald Hollow Mine staff can give a brief summary of the tour's events and divide the group into smaller groups for the educational program which will start at 9:30am.

From 9:30am to about 1:00pm, the group will be guided through the educational program. Lunch is scheduled for about 1:00pm at the mine. Pizza and soft drinks will be provided. The field trip ends after lunch (about **2:00pm**), but you are encouraged to stay at the mine and hunt for more gemstones or repeat parts of the educational program that you enjoyed the best and would like to spend more time doing. The mine closes at **4:30pm**.

Please bring plastic containers with lids or zip lock freezer bags to hold your gemstone collection; and a towel and old shoes for creeking. A change of clothes and shoes are recommended, as you should plan on getting dirty and wet. Be prepared to walk ¾ miles during the earth science lesson. Dress appropriately for the weather, as these are outdoor activities.

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AEG Carolinas Chapter
REGISTRATION AND LIABILITY WAIVER FORMS
Field Trip, Emerald Hollow Mine, Hiddenite, NC
October 21, 2017

Instructions: Each participant will need to complete the registration form and waiver form to attend this AEG event. Payment must be made to complete your registration and reserve your spot on the field trip. After completion of the forms, send forms and payment (check) to:

Sue Buchanan (sbuchanan@schnabel-eng.com),
 Schnabel Engineering, 11A Oak Branch Drive, Greensboro, NC 27407

Name of Participant: _____

Company or University: _____

Address (Street, City, State, Zip): _____

Phone (office, home, or cell): _____ Email: _____

Pizza and soft drinks from The Pizza Box will be provided for lunch and delivered to Emerald Hollow Mine.

Each participant must complete the table below for this AEG Carolinas Chapter event.

Event	Member	Non-Member	Public-Sector	Teacher	Student
Field Trip (Saturday, October 21, 2017)	\$50	\$60	\$50	\$50	\$30
Total Payment Amount:					

Payment Options:

1) CHECK:

☐ Check box if paid via check, payable to *AEG Carolinas Chapter*. Send check to Sue Buchanan.

2) PAYPAL:

☐ Check box if paid via PayPal on the AEG Carolinas Chapter website (<http://aegcarolinas.org/>) under the News & Events Page.

List participant(s) for which this payment is for: _____



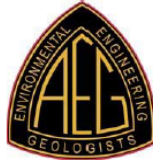
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ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS**LIABILITY WAIVER FOR FIELD TRIP PARTICIPANTS**

The undersigned having been fully advised as to the nature and possible dangers and hazards of the field trip, hereby acknowledges and agrees this _____ day of _____, 20____, that:

1. (please print) _____ (herein referred to as "Participant") intends to participate in one or more field trips sponsored by the Association of Environmental & Engineering Geologists (herein referred to as "AEG").

The field trip for which this waiver is being made is to be held on Saturday, October 21, 2017, in Hiddenite, North Carolina.

2. Participant agrees and understands that during such field trip(s), he/she will be under the direction and control of the trip leader approved by the AEG, and specifically agrees to comply with all reasonable directions and instructions by the trip director during the course thereof.

3. Participant understands and acknowledges that there are risks of injury to person and/or property that are associated with field trips, including without limitation risks related to travel hazards, terrain, weather, eating and sleeping arrangements, and other circumstances. Participant hereby voluntarily assumes all risks connected with or arising out of his/her participation in field trip activities, and waives any claim against AEG, its officers, directors, employees, agents and members for any injury, harm, damage or other liability arising out of field trip activities.

4. Participant understands and acknowledges that the AEG assumes no liability for personal injuries or property damages to participants or to third persons arising out of field trip activities. Participant agrees to hold AEG harmless from any liability for harm arising out of the acts or omissions of AEG or Participant during any such field trip, and indemnify AEG against any and all awards or judgments against AEG in favor of third parties for losses and damages (including attorney's fees and any costs involved because of said claims), on account of injury, death or property damage, or inconvenience or loss of money due to delay that may arise, by reason of Participant's participation in field trip activities.

5. I understand that my use of alcohol or drugs would impair my judgment and coordination, and I hereby waive, and will hold the AEG harmless from, any and all claims of bodily injury or other harm arising from my use of either. I will indemnify AEG against awards or judgments in favor of third parties for losses or damages (including attorney's fees and costs), of whatever nature, arising out of my use of alcohol or drugs while participating in field trip activities.

Date: _____

Signed: _____
(Participant's Signature)

Mail waiver form to: Sue Buchanan, Schnabel Engineering, 11A Oak Branch Drive, Greensboro, NC 27407
Or email waiver form to: Sue Buchanan, sbuchanan@schnabel-eng.com



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Association of Environmental & Engineering Geologists – AEG

A Look Back at the History of Our Chapter (Part 2)

By Rick Kolb, Section Chair 2006-2009



I was an AEG member from 1998-2000, while working in geotechnical geology at Law Engineering in Raleigh. However, after returning to the environmental geology department, I dropped my membership until 2005 (after MACTEC had purchased Law Engineering), when coworker and outgoing section chair Jennifer Bauer asked me, ever so sweetly, if I'd consider being a board member of the section. By that time AEG had added environmental to their name, so it seemed logical to rejoin. If you know Jennifer, you know it is nearly impossible to refuse her kind offers and suggestions; I listened as she told me the section needed a vice chair to serve with Tyler Clark, the incoming chair. Having no experience with AEG, I was a little hesitant about immediately being on the board, but Jennifer persuaded me and said I'd have help from her and other long-time section members.


Tyler served his year as chair, before we transitioned to two-year terms for the chair position, and then left the country when his wife had a job opportunity in Europe. Typically, the past chair serves on the board for a year and helps the chair when needed. Thus, I lost his help as the incoming chair, but fortunately, long-time section members such as Jennifer Bauer, Jane Gill-Shaler, and Gary Rogers helped keep the section on track without a

hitch. At the end of my two-year term, I served an additional year to allow future chair Paul Weaver learn the workings of the section.

As an environmental geologist, I saw opportunities to bring in new members from the environmental sector. I had been attending meetings of the Ground Water Professionals of North Carolina since moving to Raleigh in 1990 and knew many potential members, and thus I began encouraging them to join AEG. I also realized there were financial opportunities the section could exploit. When I rejoined in 2005, the section had about a dozen sponsors, several of which were consulting firms. However, with the addition of environmental geologists to our meetings, I felt there were opportunities to bring in new sponsors such as environmental laboratories, service companies, and field-equipment providers. Having been in the industry for 15 years, I knew many of the sales representatives, and regularly they would come by my office and say hello/solicit work. I always welcomed these folks into my office to chat and hear what news they had, and at the end of these conversations, I would pull out a copy of the latest section newsletter, which contained a sponsor application, and suggest they become a sponsor of the Carolinas Section. It was an easy sell, telling them they could meet 50, 75, or more geologists in one evening at a section meeting. I recall few instances in the years since then of companies turning down the offer (hey, they drink beer, too!). Consequently, the number of sponsors in our section increased to 28 by December 2009, and we have maintained a number between 20 and 30 since the mid-aughts. The current arrangement is beneficial for all the involved parties: the sponsors meet new potential clients, and our members are able to interact with potential subcontractors and share beers with new friends.

This increase in sponsors caused an increase in the balance of our bank account. As a non-profit, the board explored ways to use these funds wisely to benefit AEG and our profession. In 2006, before AEG started the Visiting Professional program (the practice of making presenta

(Continued on page 13)



PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

Douglas A. Canavello, P.G.
President

503 Industrial Ave. (27406)
P.O. Box 16265
Greensboro, NC 27416-0265

(336) 335-3174 ext. 121
(866) 545-9507
Fax (336) 691-0648
doug@pyramidenvironmental.com
www.pyramidenvironmental.com

Chad D. Northington, PE
Southeast District Technical Manager



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cnorthington@regenesis.com

(Continued from page 12)

tions on geology careers in geology departments at universities), I shared my concerns about the future of geology with Dr. Drew Coleman, geology professor and the undergraduate advisor at that time in the department at UNC Chapel Hill. First, we talked over the telephone, then we met, naturally, for beers at Spanky's on Franklin Street to strategize. After this meeting, I organized our section's first visit by professionals to UNC Chapel Hill, where at the end of the school day geologists talked about their careers in geology. We brought along pizza and soft drinks as an inducement to attend, and then took out the students afterward for a beer or two, all paid for by the section. We were well-received (well, maybe it was the pizza and beer?), and the following year I started organizing visits to other schools in North Carolina, first at NC State and then spreading out beyond the Triangle. As you may have seen in previous articles in AEG News, our program has been very successful (though AEG National eventually told me I couldn't take out the students and pay for their beers). However, a dramatic increase in student membership came when the section realized we could afford, through the generosity of our sponsors, to pay the \$25 student membership for anyone who wanted to join and become part of AEG. Our student membership quickly rose from one or two a year to nearly 100; it has stayed high, often accounting for a third to almost a half of our section's membership. This increase in student members in our section may be one reason the national organization later decided to make student membership free.

Another idea came from Jennifer Bauer, who suggested we invite the Jahns Lecturer and AEG President annually. Both have visited our section since 2006/2007, and we have been able to pay the expenses for both of these visitors (except air fare). Typically, we host the Jahns Lecturers for multiple days up to a week, during which they present at universities in North and South Carolina. By paying their travel expenses, we keep the costs down to AEG and are able to persuade the Jahns Lecturer to stay with us for more than a day or two. During their visits, the Jahns Lecturer presents lectures at multiple universities, in addition to presenting at one of our quarterly meetings. Our section has also been able to pay the expenses of section members to participate in AGI's Congressional Visits Day in Washington, D.C., when members visit Congressmen/women and their staff. Without the support

of our sponsors, our promotional activities as geologists would be severely curtailed.

During my term as chair, we began holding board meetings as conference calls. We were much more effective having calls when we weren't distracted before a section meeting. These calls have become a mainstay to conduct the business of our section (now chapter), and as we have grown, the agenda for these calls, as Maddie German can attest, has gotten longer and longer. The section moved from periodic board-meeting conference calls to the GoToMeeting, where we can all see the agenda but also realize we'll never get through it in an hour.

The section grew significantly during the late aughts, partly through the generosity of our sponsors, but more so from the dedication of long-term AEG members in our chapter. As a result of our efforts, AEG awarded the Carolinas Section the Outstanding Section award in 2009, setting a course for future awards, and our chapter is regularly held up by AEG national as a chapter to emulate. Congratulations to all those who have contributed in making our chapter one of the best in AEG.

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Past Chair Perspective

By Hannu Kempainen 1997-1998

I was the chair-person of the Carolinas Section of AEG in 1997-1998 following Graham Simmerman. I had been treasurer for the previous two years when Graham called me asking if I were willing the upcoming year to be the section chair. I hesitated to accept at first, but the section was small and few folks attended the quarterly meetings at the time, I thought I had no other choice but save the section to continue on AEG tradition. Those were lean years at AEG back then. Attendance at the quarterly meetings was half a dozen to at the most 20. The section finances naturally low due to lack of membership. The lack of finances naturally affected booking of a meeting site and the catering, and attracting speakers to the meetings was a challenge. Somehow each quarterly meeting was managed and we survived. The AEG Annual Meeting in 1998 was held in Las Vegas. The field trip took us to visit the Yucca Mountain nuclear waste depository that was under construction. The tunnel boring machine (TBM) was outside the entrance. Impressive piece of machinery to say the least. We probably hiked half a mile down in to the tunnel watching at awe the size of the tunnel and listening the guide explaining the engineering and construction challenges.

Now 20 years later I am most pleased to see our Carolinas Section grown to a well-functioning and managed section. To the benefit of the younger generation who have grown up with the age of internet communication, the AEG website is such a great resource compared to what we had in the days of past millennium.

Thank you all section chairs carrying on with the AEG Carolinas Section and organizing great meetings and fieldtrips and keeping it growing.

Cheers,



Hannu Kempainen, P.G.



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Past Chair Perspective

Paul Weaver 2010-2014

Paul became involved with AEG around 2007 with the Carolinas Section. In 2009, Rick Kolb, who was the Section Chair at the time, asked Paul if he would be interested in serving on the Section Board. Paul agreed and spent less than a year as Vice Chair before being elected Chair for the term starting in 2010, which was also the year that the Carolinas Section hosted the AEG Annual Meeting in Charleston, South Carolina. During Paul's first year as Chair, the bylaws of the Section were changed to extend the term of the Chair to two-years from one-year in order to give more continuity to the Section leadership. At the conclusion of Paul's second year as Chapter Chair, no one was willing to step into the Chair position, so Paul agreed to serve another two-year term.

Among Paul's proudest achievements as Carolinas Section Chair were:

- The addition of active members with the desire to move into positions of leadership within the Section,
- The continuation of the Visiting Professionals program,

- The continuation of our Section being at the forefront of all of AEG in regards to scheduling and hospitality for the Jahn's lecturer,
- Our continued outreach and service to students, sponsors, and Section members,
- Laying the foundation for the Carolinas Scholarship which was finally established for awarding of the first scholarship in 2015,
- The continued growth in Section membership,
- And the initial planning for hosting the 2019 Annual Meeting in Asheville

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Haw River Field Trip

By Sue Buchanan, Field Trip Chair

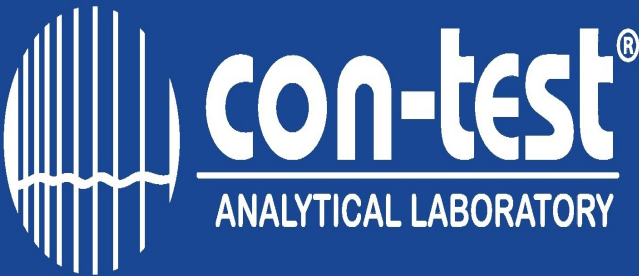
On April 22, Earth Day, about 20 AEG members, non-members, and students took a geology hike with hosts Phil Bradley, PG, and Brandon Peach of the North Carolina Geological Survey, along the Haw River near Pittsboro in Chatham County. We hiked along two separate stretches of the Haw River (north and south of Highway 64) within the Lower Haw River State National Area. Phil Bradley provided each field trip attendee with a field trip guide that will be used for part of a laypersons guide to the geology of the Haw River from Guilford County to Jordan Lake and an updated map of the Geologic Map of the Northwest Portion of the Merry Oaks 7.5-Minute Quadrangle, Chatham and Lee Counties, North Carolina (scale 1:24,000; March 2, 2017).

Phil Bradley presented results of detailed geologic mapping by the NC Geological Survey and interpretations of various outcrops and landforms along the river. The portion of the Haw River that we hiked along is located within the Hyco Formation of the Carolina Terrane. Generally, the Hyco Formation includes metamorphosed volcanic, volcanoclastic-sedimentary and intrusive rocks associated with a volcanic island arc active 630 to 612 Million years ago. More specifically we encountered metamorphosed dacites, andesites, and felsic tuffs, basaltic lava flows, metamorphosed conglomerates, and alluvium deposits (rounded boulders in the floodplain) of the Haw River and tributaries. Structurally, Phil Bradley discussed the Virgilina deformation history of old and new arcs which is seen from isoclinal folds and later anticline/syncline folding of the region. Regional faulting was discussed at the large scale with NW-SE vs NE-SW trending lineaments observed in LiDAR data of Chatham County.

For lunch, the group went to Carolina Brewery in Pittsboro. We certainly enjoyed this beautiful day and learning about the local geology. It was great way to celebrate Earth Day!

Our next AEG field trip is to Emerald Hollow Mine in Hiddenite, NC, on Saturday, October 21, 2017. Come join the fun and learn more about minerals found in our state.

Visit our website at <http://aegcarolinas.org/> for more information about this upcoming field trip.


Paul Konnik
Regional Sales Manager - Southeast

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East Longmeadow, MA 01028
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Fax: 413.525.6405

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Raleigh, NC 27617

Cell: 314.302.0431
paul.konnik@contestlabs.com
www.contestlabs.com



Honoring Phil Bradley

By Rick Kolb

Those of you who attended the Haw River field trip witnessed firsthand Phil's passion and enthusiasm for geology and learned about the role he serves as the Piedmont Geologist and Assistant Section Chief of the North Carolina Geological Survey, where he has worked since 2003. One of Phil's duties at the survey is to manage the STATEMAP project for geologic mapping in the Piedmont. In this position, he is uniquely qualified to lead field trips for AEG Carolinas. He has never said no to an opportunity to teach other geologists and the community about the Earth on which we live. You may be unaware that the Haw River trip was the fifth field trip that Phil led for AEG Carolinas, the others being Eno River State Park in 2007, Duke Forest in 2009, Falls Lake in 2014, and Reed Gold Mine in 2015. Phil has a varied background, like many of the geologists in North Carolina. After receiving his Master's in geology from N.C. State University, Phil worked as an environmental consultant for 7 years and conducted geologic and hydrogeologic site investigations for industrial, commercial and underground storage tank sites with contaminated soil and groundwater.

As a gesture of appreciation for Phil's service to AEG and the profession, the Carolinas Chapter executive committee offered to pay Phil's AEG membership for 2018. After some checking with the higher-ups of state government to confirm he was allowed to receive this small token, we have been given the okay. We are grateful for all his work leading field trips for the last 10 years, and suspect he will receive in the not-too-distant future another call from AEG asking him if he can lead his sixth field trip.

Thank you, Phil!



Georamblings (Continued from page 5)

events have transpired and worn themselves out, then other factors enter into the picture and the climate begins to warm up.

Then there is the geologic record found in the sediments of the present day oceans. Cores taken in the oceans bring up the foraminifera *Globigerina bulloides*. It has been discovered that when the ocean waters were warm, the shells of the *Globigerina* coiled to the right and when the ocean waters were cool the *Globigerina* coiled to the left. So the fossils provide information about the climate that otherwise had to be sought by careful and expensive chemical procedures which need not be explained here.

Alan King

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The Annual Meeting Has an Event for the Young and Young at Heart

By Madeline German

Greetings Carolinas Chapter!

I'm writing to let you know about an important initiative the Student & Young Professional Support Committee (SYPSC) is supporting for this year's annual meeting in Colorado Springs. Even if you are not a student or young professional you know some Icebreaker/Networking events are great for all!

New event! "Young at Heart Happy Hour" after the ice breaker on Tuesday night - Phantom Canyon Brewery – Tuesday 9/12/17, 8pm-11pm

This free social event is a great way to start your week in Colorado Springs. Make some new friends and mingle with your existing friends in environmental and engineering geology while you enjoy free appetizers (and a free drink ticket if you arrive early)! Just a short walk from the hotel, this event is an excellent opportunity to build connections with peers, mentors, senior fellows, and potential employers. We encourage students and young professionals to join the event and welcome experienced professionals who are "young at heart!"



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mclaurinbt@subhorizonresources.com

Silent Auction to Benefit the AEG Foundation

By Jane Gill-Shaler, Director AEG Foundation

Hey, **AEG Carolinas** wonderful people! **PLEASE** donate something towards the AEG Foundation Silent Auction! All the proceeds benefit the **AEG Foundation K-12 Education Fund**, which is to encourage K-12 students, K-12 teachers, and elementary, middle and high schools to explore methods and technologies to teach geology. We are a 501(c)3 charitable foundation, so your donation is fully tax deductible. You will receive an official letter from AEG Foundation for your taxes, along with our sincere thanks!

This time we are trying something different – I can pick up heavy items (like huge rock samples) from you in person, if you live within a couple of hours drive from High Point, IF YOU DONATE ITEMS BEFORE AUGUST 15, 2017. I will be DRIVING to the Colorado Springs AEG 2017 Meeting, so there will be no shipping costs to you if you meet that deadline. Also, I will bring you homemade cookies. But remember to give me some time to schedule the pickup.

Some suggestions are:

- Mineral Specimens
- Jewelry
- Gift baskets
- Quilts
- Vacation Accommodations
- Paintings and numbered prints
- Raft trip
- Fishing trip
- Technical webinars
- Special Event tickets for the next annual meeting in San Francisco
- Laptop
- Field gear (rucksacks, leather cases, clip boards, rock hammers, hats, sun glasses, water filters, rain gear, climbing gear, snow shoes, crampons
- Brunton Compass

So, first, please first email me with the following information:

A description of your item (as long and complicated as you wish!)

Your "donor value," the amount you reasonably believe your item is worth

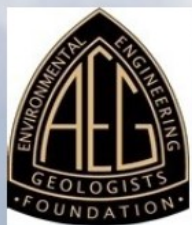
The minimum value that you would accept for the item

Your name and/or company name as donor, to appear on our bid sheet.

Your contact information (address, email, phone) so we may send you your donation acknowledgement.

We will assign an item number, and enter this information on the bid sheet to accompany your item at our silent auction table.

(Continued on page 20)



First Annual Golf Fundraiser for the AEG FOUNDATION!

JOIN US for the First Annual Golf Fundraiser for the AEG FOUNDATION! Come out and have some fun while helping the AEG Foundation give back to our Professionals and Students.

*REGISTRATION FORM IS ON THE BACK or
online at www.aegfoundation.org/golf*

DATE: Monday, September 11, 2017

LOCATION: Kings Deer Golf Club, Monument, CO

WEBSITE: www.kingsdeergolfclub.com

NOTE: Transportation to and from the golf course is
available upon request in advance.

TIME: 7:30 Registration, 9:00 shotgun start

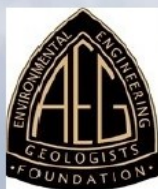
EVENT PAGE: www.aegfoundation.org/golf

SPONSORSHIP OPPORTUNITIES

		Cost
Communication Sponsor	A Link on the AEGF event web Page; Sponsor's name on all literature for the tournament.	\$1,500
Meal Sponsor	Self provided banner in dining area; opportunity to talk about your group for up to 5 minutes at the meal	\$1,000
Beverage Sponsor	Self provided banner in dining area.	\$500
Golf Shirt Sponsor	Golf shirt with AEG Foundation Logo and Your Company logo. Exclusive Sponsorships	\$2,500
Transportation Sponsor	Signage in transportation vehicle to and from the Kings Deer golf course and the Antlers Hotel	\$750
Hole Sponsor	Signage on a hole	\$200
Vendor Sponsor	Set up on a hole with hand out literature at that location, can also sponsor a game on the location	\$500
Award or Prize Sponsors	Donation of prizes for winners (8)	
Volunteer Sponsor	Help us cover the cost of volunteers to the event (meals, and ancillary items)	\$100

ADDED SPONSORSHIP LEVELS

		Added Cost
Basic Level	Will accept any suitable promotional items for ditty bag, such as towels, tees, balls.	None
Plateau level	Links on event website, sponsor board at AEGF Booth at the Silent Auction.	\$200
Pikes Peak Level	Plateau level benefits, PLUS a team of 4 in the Tournament	\$750



AEG FOUNDATION GOLF FUNDRAISER REGISTRATION FORM

The golf course at King's Deer is a regulation 18-hole championship golf course. It was designed and built by Redstone Golf Group and opened to much fanfare in 1999. Throughout its history, King's Deer Golf Club has earned a reputation for its outstanding conditions, friendly staff and quiet atmosphere with great views of Pikes Peak and the Front Range. With four sets of tees, the course will test the abilities of golfers of all skill levels. We welcome you!

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 Address 2 _____
 City _____ State _____ Zip _____

CHAPTER AFFILIATION _____

GOLF PARTICIPANTS

Team of 4 (\$600) You will be contacted 30 days prior for all names in your group.

Individual (\$150)

Team or Player Name (If Playing with someone else) _____

Sponsor a student to play \$150

Quantity Amount

OTHER DONATIONS

I cannot play in the tournament, but please accept my donation to the Foundation

Please let me sponsor a volunteer's cost (\$100)

SPONSOR CATEGORIES AND LEVELS - See descriptions on front page.

Sponsorship Categories	Sponsorship Levels			Amount
	Basic	Plateau	Pike's Peak	
Communications	included	\$1500	\$2100	
Meal	\$1000	\$1200	\$1750	
Beverage	\$500	\$700	\$1250	
Shirt	\$2500	\$2700	\$3250	
Transportation	\$750	\$950	\$1500	
Hole	\$200	\$400	\$950	
Vendor Sponsor	\$500	\$700	\$1250	
Award or Prize Sponsor	AWARD	+\$200	+\$750	
TOTAL				

The AEG Foundation is a 501(c)3 organization. For your tax purposes, the Foundation's tax ID number is 94-3168991. Our website is at www.aegfoundation.org. The event page is at www.aegfoundation.org/golf

Please mail this form to AEG FOUNDATION—Golf
 4123 Broadway # 817
 Oakland, CA 94611

For Golf event related questions—Please email Bill Flanigan
bdfanigan@sbcglobal.net

Silent Auction (Continued from page 19)

If you are unable to have me pick up your item, then, please carefully wrap and ship your item to the following address, to arrive between September 7 and 9, 2017:

Antlers Hotel
Attn: Guest Heather Clark (AEG Meeting Manager)
AEG FOUNDATION SILENT AUCTION
4 S Cascade Ave, Colorado Springs, CO 80903

Include some business cards or other information if you would like bidders to know about yourself. Again, thank you for your support of the AEG Foundation; we are so very grateful to you!

Jane Gill-Shaler, Director, Silent Auction Chair
 AEG Foundation
janehgillshaler@gmail.com
 336-687-6144

EDUCATION

Savannah Bryant Awarded AEG Carolinas Scholarship


By Jane Gill-Shaler, Director AEG Foundation

Congratulations to our own Savannah Bryant for being awarded the Carolinas Scholarship for 2017! Savannah plans to graduate from NC State University in Raleigh this August with a Bachelor of Science in Geology (BSG), and she is using her award to help pay for the NC State Field Camp course, a required component of the BSG degree. Her professors at NC State are very supportive of her, lauding her academic success in some courses, difficult even for postgraduates, as a combination of hard work and strong intellect. Savannah's other awards and scholarships include the Skip Stoddard Student Research Fellowship, the Marine, Earth & Atmospheric Sciences (MEAS) Honors Program, and the NC State University Dean's List.

Bryant is passionate about protecting and cleaning water resources for the betterment of humanity and the world, and is working hard towards her goal. But she has energy enough for a host of extra-curricular activities, too. Since high school, she has been involved in musical productions, marching band, her church choir; and has worked as a Teacher's Assistant at NC State University, been a manager at Jersey Mike's Subs, and volunteered with M-Pact, a service nonprofit. All these activities are part of a well-rounded education!

Savannah's long-term plans are to use her geology background for the protection of our limited fresh water resources. To that end, she will be attending graduate school, working toward becoming a Certified Hydrogeologist, and eventually working in consulting or the USGS to address water quality issues.

Again, we congratulate Savannah Bryant for being awarded the Carolinas Scholarship for 2017! We hope she will become even more involved in AEG in the future.



TODD ELMORE
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EDUCATION

Field Camps Are Starting Now

By Jane Gill-Shaler, Director, AEG Foundation

There are a lot of field camps starting this summer, much to the delight of students all over America. **AEG FOUNDATION** is doing our part in helping to support worthy students in their education, by providing scholarships for field camp, such as the **Beardsley-Kuper Field Camp Scholarship Fund** and the **Norman R. Tilford Field Studies Scholarship Fund**. These are a huge help to students, as field camps are a major educational investment, and one of the most helpful to students who have not studied field conditions in environments away from their home state. This is a complicated, diversified, variegated world, and our field camps help students learn first-hand.

Remember, the **MISSION** of the **AEG FOUNDATION** is “*Advancing the Science, Scholarship and Education in Environmental and Engineering Geology for the Benefit of All.*” To do this, we raise money, invest it wisely, and provide funding in the form of scholarships and grants for research, professional seminars, and speaking engagements.

So, for our field camp scholarship winners this year, we offer our heartiest congratulations, and have fun at field camp!

Norman R. Tilford	Graduate	Johanna Eidmann	Colorado State University
Norman R. Tilford	Graduate	Erin Lathrop	Utah State University
Norman R. Tilford	Undergraduate	Amy Plechacek	Virginia Tech University
Norman R. Tilford	Undergraduate	Anna Stanczyk	University of Alaska, Anchorage
Beardsley-Kuper	Undergraduate	Andrew Oberhelman	University of Puget Sound
Beardsley-Kuper	Undergraduate	Jeffrey Weiss	NC State University

We look forward to seeing you in Colorado Springs! **THANK YOU!**

Jane Gill-Shaler
Director, AEG Foundation
janehgillshaler@gmail.com
336-687-6144



ANNOUNCEMENTS

Calling All Past Chairs!

If you served as the Carolinas Section or Chapter Chair we would love to honor you. We are having a special 40th anniversary Dinner Meeting in Greensboro October 19; I hope you can make plans to attend. Additionally please spend a few minutes and contribute a summary or short anecdote to the winter issue of GeoNews. Submit to jenntec14@gmail.com. I can't wait to read and hear the wonderful stories.

Upcoming Board Elections

AEG Carolinas is supported by an amazing group of dedicated volunteers who work hard to bring you classes, field trips, meetings and news of the profession. Typically our board positions are on a one year cycle with the Chair serving two years. This election, 2017-2018, all the positions will be for a one year term. Additionally, I will be running for an additional year as Chair since Susan Kelly, our current Vice-Chair, would like to wait a year to ensure she can provide our membership her full energy, focus and dedication. The ballots you will receive will contain the following names as well as bios for each.

Chair – Maddie German (Raleigh)
 Vice Chair – Susan Kelly (Asheville)
 Treasurer – Walt Plekan (Raleigh)
 Secretary - Jen Thomas (Charlotte)

You will shortly be receiving ballots electronically. I encourage you to participate in the election by completing the ballot you receive and returning it promptly. Please contact me if you have questions or comments regarding the upcoming election.

Continuing Education Comes to Geologists Licensed in North Carolina Rick Kolb, Chair, NCBLG

Licensed geologists should now be aware that the rules have changed: licensees are required to complete 12 hours of continuing education yearly, coinciding with the license year of July 1, 2017 to June 30, 2018. A list of pre-approved providers of CE is on the board's website, www.ncblg.org. Other providers and courses will be added as they are proposed and approved. Post-course approval is also allowed. The board established a standing CE committee of the board members who will review submittals for pre/post-approval. The revised rules also created a new status, inactive geologist, for those who no longer practice (and/or do not want to do the continuing education). Details are on the board's website.

Vapor Intrusion: The Conference II Coming to Charlotte October 5-6, 2017

As reported in the spring newsletter, the second vapor intrusion conference will be in Charlotte at the Charlotte University Hilton. We hope that having this conference in a western location will bring in more professionals and regulators from South Carolina, Georgia, Alabama, and Tennessee. To facilitate getting back home at a reasonable hour on Friday, the conference will end at 2:00 PM that day.

Our list of speakers is shown below; we expect this conference will be even better than the first, with more speakers from around the U.S. Blayne Hartman and Henry Schuver will be the keynote speakers. We will have a special TCE session on Thursday afternoon to close the day's presentations, and it will lead into the social Thursday afternoon. The conference planners have nearly completed the registration and sponsor/exhibitor forms; look for them on our website, www.aegcarolinas.org. As we did in 2014, the conference will include breakfasts and lunches and Thursday and Friday, and a social on Thursday night.

Get a Jump on Hotel Reservations for the VI Conference

Although registration for the VI conference is not yet set up, you can make your hotel reservation now through the link below, directly with the Hilton. We have reserved a block of rooms for the rate of \$139/night. Reservations for the block must be made by September 11, 2017.

Your web page address is: http://www.hilton.com/en/hi/groups/personalized/C/CLTHUHF-AEEG-20171004/index.jhtml?WT.mc_id=POG

Group Name:	AEG-Vapor Intrusion
Group Code:	AEEG
Check-in:	04-OCT-2017
Check-out:	06-OCT-2017
Hotel Name:	Hilton Charlotte University Place
Hotel Address:	8629 JM Keynes Drive Charlotte, North Carolina 28262
Phone Number:	7045477444

Meeting Minutes 6-11-2017

By Alex Rutledge, Past Chair

Call to Order

Roll Call – Determination of Quorum – Alex Rutledge, Maddie German, Beca Deal, Susan Kelly – Quorum present

Also in attendance: Paul Weaver (Regional Director), Rick Kolb, Jane Gill-Shaler, Walt Plekan, Jenn Thomas (by telephone), Adam Phillips (by telephone)

Carolinas Chapter Finances – Eric

Review of current chapter finances

Checking \$5,691.25

Savings \$15,705.01

Eric is going to get the breakdown for the January and April meetings as well as the Haw River field trip sent out by the end of June.

Proposed Bank Account Changes –

Proposed new policy regarding sending account information to National/Headquarters.

Governance Committee tasked with drafting a policy for sending financial information to Headquarters. Will likely be bank statements or quarterly reports.

Our Chapter plans to have monthly bank statements sent directly to Headquarters (i.e. automatically send emails via bank website).

P-cards off the table

Signatures for Account

Walt – has not been added yet

New Wells Fargo rules: Every signatory has to be present to add a signer

ACTION ITEM: Eric – find out how to get signatories on/off of the account & how many people (and who) are signatories. Plan is to have only Treasurer and Chair be signatories. Also plan to take Cynthia off the account.

Do we want to move to more frequent meetings, our agendas are very long and we are not covering all of the material? Maddie personally enjoys the face to face once a year, but if others don't find this useful, we can table again. Thoughts.

Proposal to have conference call every two months instead of every quarter. This will help keep meetings to an hour and be able to complete our agenda.

Annual face-to-face meeting in January/February so we don't interfere with the busy fieldwork season

Board Positions for next term

Eric will unfortunately be leaving the board, due to time constraints; however, he will be switching with Walt who will be stepping into the Treasurer role. Eric will become the Sponsor Chair.

Susan K. would like to delay transitioning for a year due to her upcoming work schedule

Proposed 17-18 Board:

Past Chair – Paul W. (Alex is moving to Seattle, so Paul will fill Past-Chair Role)

Chair – Maddie (Raleigh)

Vice Chair – Susan K. (Ashville)

Treasurer – Walt (Raleigh)

Secretary - Jenn T. (Charlotte)

Paul W. will send out ballots etc. for the upcoming election, should go out end June early July.

Ballot for all Board positions will be for one-year term, including Chair

Maddie will write a short article for the newsletter about the upcoming board.

Beca would like to help Eric as co-chair for sponsors.

On deck for Newsletter Editor – Cortney Cameron. NC Central graduate student

On deck for Membership Chair - Anthony Herrmann (young professional with HDR)

GEONews – Jennifer Thomas

Cortney has her own license for Adobe InDesign
(Continued on page 26)



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Meeting Minutes (Continued from page 25)

(version CS6) and thinks she could use that, although she will likely have to rebuild the template if we were using another software before (e.g. QuarkXpress). She won't have access to her regular computers until the first of July.

Jenn is transitioning into Secretary position in September. Jenn and Cortney will work together over the next few issues, so Cortney can learn the ropes.

Next GeoNews was due June 1, but Jenn just got a new version of Publisher. Time delay due to compute issues.

New schedule is to have the newsletter out by mid-July.

Will need to get Cortney Microsoft Publisher so we don't have to create a new template for the newsletter.

Jenn and Cortney will work on this once Cortney is back from her graduate work abroad.

Membership – Cortney

May membership Statistics:

Current Members (189):

1 – Affiliate

Emeritus

86 – Full

1 – International Student

1 – Life

2 – Post Grad

4 – Senior Emeritus

90 – Student

3 – Teacher

By State

153 NC members (81%)

22 SC members (12%)

14 other/blank (7%)

Top cities (current) covers 57% (107) of members:

1. Raleigh (26)

2. Greensboro (18)

3. Charlotte (14)

4. Cary (12)

5. Wilmington (11)

6. Greenville, NC (7)

7. Greenville, SC (6)

8. Hillsborough (4)

9. Asheville/Durham/Boone (3)

Note: This doesn't include commuting areas (e.g. an address in Asheboro doesn't show up on this list even though it's part of the Greensboro commuting area).

We would like to increase Teacher membership. Annual dues are only \$35. We can try and incentivize teacher by providing and letting them know about student opportunities (poster presentations at quarterly meetings, scholarship opportunities, visiting profes-

sionals). An email blast for just faculty could be beneficial, touting the benefits to students and keeping them abreast of AEG Carolinas activities.

Ideas for 2017-18 membership drive.

Add a regular meeting in Wilmington given membership count and their difficulty in making other Chapter meetings.

More social media presence and post several times about "time to update membership".

Offer free meal for new members. Put it on the meeting announcement.

Ideas to better market AEG's value.

Sell the idea of supporting your profession, and an association that works for the profession.

Tell the stories of us fighting to keep licensure, and AEG members supporting each other, getting each other jobs. Post them on the website and put them in newsletter.

Offering and marketing more CEUs.

Networking and getting to know the local professional network.

SC: How to get more members? SCAEP is active, we could propose to have a joint meeting with them for exposure.

Where do we need to broaden our network to be more available to the membership?

Sponsor Update – Walt

24 sponsors to-date totaling \$7150 in sponsorship dollars

Walt is now working to get VI 2 sponsors/exhibitors. Many of our existing sponsors will be willing to exhibit at VI 2 conference.

Walt and Eric will be working together over the next few months to transition the Sponsor duties to Eric and the Treasurer duties to Walt.

Regional Updates – Paul

Updates from AEG's the Mid-Year Board Meeting

Regional Director Travel Policy (& dues update)
- \$1000 per year available for each RD to travel to bi-annual board meetings. Increase national dues by \$10 a year will go to RD Travel fund.

Professional Forum Policy – now adopted. New policy available upon request.

Changes on executive council – Kathy Tros was supposed to move into President position but has dropped off the Board for personal reasons. Dave Fenster will be put on ballot as incoming Vice President. Kevin Richards will be put on ballot for President. Cynthia Palomares will be Treasurer, Bill Godwin will be Secretary.

Southeastern Region Sub-chapters

Nashville Chapter in the Works (8 members currently there)

Chapter-related hazards and local experts – to be available to speak to media following hurricanes, landslides, earthquakes, etc.

Ex. Landslides – Jen Bauer

Meeting Minutes (Continued from page 26)

Other ideas?

Coastal hazards

Dam Failures

Flooding

National requesting workshop ideas, send ideas to Yolanda

Options for SE Regional Director

3-year term beginning in September 2018 (@ San Francisco meeting); Paul's term expires in 2018

NCSTA Meeting

Planned for October 19-20, 2017 in Greensboro

Level of support? *We have supported the North Carolina Outstanding Earth Science Teacher and Educator Awards (OEST and OESE respectively) in previous years of the OEST and OESE winners in the amount of \$250 each, to support travel and registration to the NCSTA conference.*

VOTE: Support the North Carolina Outstanding Earth Science Teacher and Educator Award winners in the amount of \$250 each - Unanimously approved

Update info from Randy – This year some of their other sponsors have backed out, and Randy has asked if we are able to increase our donation amount.

We should ask what the additional funds would be used for if we provided additional support. Rick to reach out to Randy (Rick to meet Randy July 6 at Boylan Bridge)

Carolinas Scholarship – Paul/Jane

Savannah Bryant (\$1500 NC State) was selected last month as the 2017 scholarship winner

Only four applicants in 2017

Current Balance is \$7,964.46

We started out with \$10,000, gave away \$2,000 last year, and have raised close to \$1,000 this year

Difference in balance is due to AEG Foundation withdrawals for management of the fund. See Foundation policies for details of man-

agement fees.

Plans, updates, ongoing fundraising

50/50 should be done at every dinner meeting

Raffle at VI 2 conference?

VOTE: Fund Carolinas Scholarship in the amount of \$1,000 for 2017 - Unanimously approved

Field Trips - Sue B & Cortney

Emerald Hollow Mine – Hiddenite, NC

Sat Oct 21st 9AM -2PM

4 SC CEUs, NC – TBD

Hope to have NC CEUs set up by October once NC Board is ready to approve CEU requests

2018 Spring USC Field Trip

Hosted by Lindsey LaRocque and Ali Tabrizi in SC

Includes Columbia, SC tour

No dates until Fall (work with school)

Will include a Friday Dinner Meeting

visit the Geotech Lab at the University in the morning, visit one dam before lunch, go to lunch, then visit one to two dams in the afternoon

April 22, 2017 Haw River & Brewery Tour

Successful – good turnout and nice day

Rick proposes to offer membership renewal to Phil Bradley in

He hosted several field trips and is willing to help out

VOTE: AEG Carolinas will provide free membership to Phil Bradley in 2018 in appreciation for all of his work in 2017 and prior years - Unanimously passed.

Brigit Doyle may have ideas for field trips in SC.

Cortney should reach out to Brigit.

AEG CAROLINAS turns 40 – Maddie

Use the 40 year logo (thanks Cortney)

Messages from past chairs – Maddie to send out email

Summer camping trip or party?

Beca has volunteered to have a social event at her house (Saturday in mid-August)

(Continued on page 28)

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SAEDACCO is using its Roto-Sonic drill to conduct Groundwater Interval Profile Sampling. This in-situ sampling system is used in sedimentary aquifers with a two inch stainless steel screen, inflatable packer and a Grundfos Redi-Flo pump to collect discrete formation samples at a rapid pace during the drilling process. This system assists the client in determining the vertical extent of contamination in aquifers without having to install multiple monitoring wells. Cost savings, innovative ideas! Let us know how we can help you on your next project.



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Meeting Minutes (Continued from page 27)

Gary Rogers may be able provide equipment and knowledge for pig pickin' (Alex to check)
 Pace Labs has shown an interest in sponsoring
 Reach out to sponsors to see if anyone else wants to get involved
 Beca is located near UNC Charlotte, so hotels around University would work for anyone who wants to stay overnight, Beca will allow people to camp in yard and may be able to put a few people up in her house
 Beca has three folding tables. She can borrow chairs. Benches are on the deck.
 Those who have pop-up shade should bring it (Smith Gardner and Schnabel)
 Ideas for GSO meeting since that was the one that started it all (October / November)
 Old photos from past years
 Invite past chairs to honor them
 May need a different venue to accommodate (Paul and Alex to explore options)
 Revolution Mills
 Gibbs
 Natty Greene's
 Preyer
 Foothills
 Other ideas

Upcoming Meetings

Need to start including a business meeting at the beginning of announcements
 Power Point slides a great addition (Thanks Beca!)
 Asheville (target Friday, September 22)
 Speaker needed – Jody Kuhne (Paul will reach out and gauge Jody's interest)
 Sponsor tables – reach out and see if we can get sponsors for meeting.
 Location – Susan to coordinate
 Who to set up - Susan
 Greensboro (40-year event) (October / November)
 Black 40 year balloons and streamers
 Rick to ask Cyrus Parker if he is interested in speaking
 Sponsors?
 Natty Greens – Possibly a new venue since it will be the 40th anniversary meeting
 Who to set up - ?
 Vintage theme
 Raleigh meeting?
 No summer Raleigh meeting due to 40-year social event planning social in Charlotte

Sponsor Tables

Greensboro meeting: Geologic Exploration & Eastern Solutions (also wants to do a drink ticket – can probably split between the two)
 Asheville?
 Also speak to sponsors about contributions to the August Social

VI 2.0 – Rick

At: Charlotte University Place Hilton: October 5-6,

2017 (Heather helped with the contract) – signed by Dale

Planning team: Rick (Ral), Grady Shields – lawyer (Ral), Becca (Cha), Brian Smith (TN), Paul Konnik (also Ral), Jenn Thomas (Cha), Joanna (Cha), Walt (Ral), Rohit (Ral), Adam (Ral)

Advertise to Atlanta Chapter and can promote in VA and TN as well

Speaker list – currently have more than we need, lots of national speakers

First email blast just sent out

Limited to 190 people due to venue.

Limited exhibitor space. So we're trying to provide incentives for Sponsorships.

Registration fee: \$279 for members, \$329 for non-members

Incentivize joining AEG as part of meeting registration

Rick has asked Yolanda to provide a cost for handling registrations through HQ; looking at other alternatives

Be sure to track and keep receipts for all expenses so we can accurately represent surplus

Another planning meeting in 2 weeks

Rick to contact Kevin Richards (AEG President, to see if he would like to come to VI and do a brief introduction)

2019 Asheville Meeting – Paul

Any announcements or updates for the group
 Signed contract with the Community Theatre, to have the opening session (\$1500)
 Accents on Asheville – Paul working with them for guest tours
 Logo
 Jane has drafted a great logo
 Suggestions for edits include shrinking the size of the white text in the lower right hand corner
 Remove rock hammer
 Asheville Visitor folks have been helping with many items
 Needs – not too much right now
 Overflow hotels - Sheraton, Aloft
 Next meeting – next couple of months

Visiting professionals – Rick

Where did we go – UNC Wilmington, UNC Charlotte, Clemson, App State, ECU
 Planned schools for spring 2017- Will ask the usual schools and gauge interest

Needs

Still half-heartedly looking for a dedicated volunteer to replace Rick.

Well Supplies for Haiti – Rick – Tabled until we get more information on needs and timing

Social Activities – Adam/Rick

Ideas for social events, Raleigh, Charlotte and Greensboro.

(Continued on page 29)

*(Continued from page 28)***Baseball**

Help putting together a game for Raleigh, Charlotte and Greensboro

James Whitt may be able to set up Greensboro baseball event (Alex to reach out)
[alternates, Doug Canavello]

Onto website and email blast ASAP

Each area have own social coordinator?

Brewpub socials – Boylan Bridge in Raleigh has reopened

40th anniversary event

Rick will set up social Raleigh event in August / September

Joanna may be able to set up social event in Charlotte

Communication and Social Media - Joanna

Reminders to apply for and donate to the Carolinas Section Scholarship. These should pop up at least every other week

Section meeting and social announcements

Need to start adding interesting articles – Jane will help, Cortney has been adding good content

Add additional student volunteers (reach out at meetings)

Focus Groups – Maddie/Paul

With the restructure past, the other areas of the needs assessment are now the focus of the EC. These focus groups are designed to be goal driven.

Therefore, they will be more transitional than a committee; they will operate for a short time to fulfill a purpose/goal, then be disbanded and members can move into other groups or take a break, however, fits into their schedule.

4 groups:

Focus Group #1: Increasing Our Environmental Presence

Focus Group #2: Young Professional Engagement

Focus Group #3: Disaster Plan

Focus Group #4: New Chapter Development

Carolinas By-laws - Maddie

At annual meeting 2016, determined individual chapters do not need their own bylaws; we just need a policy or operating procedure for Chapter activities.

I have copies of old By-laws from Rick. I have not started working on [this](#).

Suggested that we draft “Guidelines” instead of Chapter policies, stating board positions, terms, mission, what requires a vote.

Next Call will be early August, before our 40-year social event.

Adjourn: 2PM

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Below is a quick breakdown of the exciting things happening at ES:



Added Inventory / Supplies:

Along with several items added to our growing inventory, here is a quick list of those specialty items that have been requested:

- Core Drill w/ water kit
- Hammer Drills
- Diaphragm Pumps
- Air-Sparge System (Pilot Testing)
- SVE System (Pilot Testing)
- Sewer Camera w/Locator
- Downhole Camera w/DVR
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The Geo-Carolinas Chapter of the Geo-Institute is proud to announce the Inaugural Geo-Carolinas Conference. The event will take place October 9 and 10, 2017 in Charlotte, North Carolina. The conference will include state-of-the art technical presentations by leaders in the field of geotechnical engineering. Guest speakers will include Anne Lemnitzer, Dave Paul, Allen Marr, Tim Stark, Silas Nichols, Jimmy Martin, Tom O'Rourke, Dan Brown, John Daniels, Ken Stokoe, Rick Deschamps and George Koerner.

The conference will consist of 8 presentations followed by a reception on Monday, and 4 presentations on the following Tuesday, for a total of 12 pdh opportunities. Breakfast, lunch and hors d'oeuvres will be provided on Monday, as well as breakfast and lunch the following day.

Lodging for the event will be provided by SpringHill Suites Charlotte Uptown (www.marriott.com/cltsd). For the group discount rate, [click here](#) or call 704-439-8100 and asking for the Group Code GEO. (Note that the group code doesn't work from the regular hotel website or the Marriott app).

Onsite parking is also available at the UNC Charlotte Center City Building where the event will be held. Parking is included in your registration.

Exhibit space and sponsorships are now available. Please see exhibit layout below and registration for additional details. Take advantage of our early bird registration and exhibit discounts by registering before August 11. For additional details, please visit <https://www.eventbrite.com/e/geo-carolinas-conference-tickets-34363088924>

Thanks and we look forward to seeing you there.

Geo-Carolinas Chapter of the Geo-Institute

Conference Committee

Jesse Jacobson

Billy Camp

Ron Andrus

Duane Bents

Matt Silveston

CALENDAR OF EVENTS - 2017

Geological Events in the Carolinas

Courtesy of AEG Carolinas Chapter – www.aegcarolinas.org. Last updated June 19, 2017
 Send updates/corrections to Josh Hanks, Duncklee & Dunham, josh@dunckleedunham.com
Meeting Date, Time, and Location are Subject to Change – Please Verify Prior to the Meeting

Date: Thursday, August 3, 2017

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter
 Location: 6:30-7:45 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 400; Raleigh
 Details: www.meetup.com/EWB-USA-RTP-Professional-Chapter/

Date: Thursday, August 17, 2017 (meetings are held on the third Thursday of the month)

Event: Meeting of South Carolina Association of Environmental Professionals
 Presentation: TBD
 Cost: Annual fee of \$25 includes pizza, beer and soft drinks at all meetings
 Time: 6:30pm Social with Pizza & Beverages, 7:00pm Presentation
 Location: Jim Hamilton-L.B. Owens Airport – 1400 Jim Hamilton Boulevard, Columbia, SC
 Contact/RSVP: Sherri Scott at sherri.scott@tersusenv.com

Date: Thursday, September 7, 2017

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter
 Location: 6:30-7:45 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 400; Raleigh
 Details: www.meetup.com/EWB-USA-RTP-Professional-Chapter/

Date: September 10 – September 16, 2017

Event: AEG Annual Meeting
 Location: Antlers Hilton Colorado Springs; Four South Cascade, Colorado Springs, Colorado, 80903-1685
 Details: <http://aegweb.site-ym.com/events/EventDetails.aspx?id=917578&group=>
 Contact: contact@aegweb.org

Date: Thursday, September 21, 2017

Event: Ground Water Professionals of North Carolina Dinner Meeting
 Presentation: Tree Wells: The Next Step in Phytoremediation by Dr. Edward G. Gatliff
 Location: TBD
 Cost: Standard \$45/Gov. Employee \$20/ Students Free
 Details: TBD

Date: Thursday, September 21, 2017 (meetings are held on the third Thursday of the month)

Event: Meeting of South Carolina Association of Environmental Professionals
 Presentation: TBD
 Cost: Annual fee of \$25 includes pizza, beer and soft drinks at all meetings
 Time: 6:30pm Social with Pizza & Beverages, 7:00pm Presentation
 Location: Jim Hamilton-L.B. Owens Airport – 1400 Jim Hamilton Boulevard, Columbia, SC
 Contact/RSVP: Sherri Scott at sherri.scott@tersusenv.com

Date: October 5-6, 2017

Event: AEG Vapor Intrusion Conference
 Location: Hilton Charlotte University Place; 8629 J. M. Keynes Drive, Charlotte, NC 28262
 Details/Registration: <http://aegcarolinas.org/vapor-intrusion-the-conference-ii-oct-5-6-2017/>

Date: October 6, 2017

Event: ASBOG Geology Exam
 Details: Deadline to apply for the exam is August 18, 2017 (and preapproval to take the exam before that)
 Location: McKimmon Center, NC State University, Raleigh
 Contact: www.ncblg.org

Date: October 19-22, 2017

Event: North Carolina Science Teachers Association Professional Development Institute Conference
 Location: Koury Convention Center, 3121 West Gate City Boulevard, Greensboro, NC 27407
 Information: <https://www.ncsta.org/events/>

(Continued on page 34)



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(Continued from page 33)

Date: Saturday, October 21, 2017

Event: AEG Carolinas Fall Field Trip

Location: Emerald Hollow Mine, 484 Emerald Hollow Mine Drive, Hiddenite, NC

Time: 9 AM to 2 PM

Cost: Members, Public sector, Teachers \$50; Non-members \$60; Students with college ID \$20

Details: <http://aegcarolinas.org/fall-field-trip-emerald-hollow-mine-oct-21-2017/>

Registration Deadline: Monday, October 16, 2017

Date: October 22-25, 2017

Event: Geological Society of America Annual Meeting

Location: Washington State Convention Center, 705 Pike Street, Seattle, Washington 98101

Technical Session and Short Course Proposal

Deadlines: August 1, 2017

Registration Deadline: September 18, 2017

Information: <http://community.geosociety.org/gsa2017/home>

Date: Tuesday, October 31, 2017

Event: ASBOG Annual Meeting

Location: Portland, Oregon

Contact: ncblg@bellsouth.net

Date: November 3-5, 2017

Event: Annual Carolina Geological Society Meeting and Field Trip

Topic: Ramping Through the Piedmont: The Hycos Shear one and associated hanging wall rocks in north-central North Carolina

Trip Leader: Jim Hibbard, North Carolina State University; Phil Bradley PG, NC Geologic Survey for the Piedmont; Brent Owens, College of William and Mary

Location: Hampton Inn, Roxboro, NC

Cost: TBD

Details: http://carolinageologicalsociety.org/CGS/Next_Meeting.html

Date: Thursday, December 7, 2017

Event: Ground Water Professionals of North Carolina Dinner Meeting

Presentation: Naturally Occurring Arsenic in North Carolina Water Supply Wells and its Toxic

Impacts for Human Health by Dr. Rebecca Fry

Location: TBD

Cost: Standard \$45/Gov. Employee \$20/ Students

Free

Details: TBD

Date: September 16 – September 22, 2018

Event: AEG Annual Meeting

Location: Hyatt Regency San Francisco, Five Embarcadero Center, San Francisco, California, 94111

Contact: contact@aegweb.org

Date: September 15-22, 2019

Event: AEG Annual Meeting

Location: Asheville, North Carolina



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Applicants for Affiliate Member Class shall be scientists or engineers who work with engineering geologists, or persons interested in environmental and engineering geology.

TEACHER

Sign up for Teacher membership at www.aegweb.org/join

Applicants for Teacher Member Class shall be engaged in full-time teaching at the Primary, Secondary or Post-Secondary level in the area of Earth Science education or a related subject.

INTERNATIONAL

☐ International Dues - \$25

Applicants shall hold the same requirements as Full Member Class but shall not be a citizen of the United States. International Members receive online digital access ONLY to AEG publications.

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

3. CONTACT INFORMATION (please print legibly)

Individual Name _____

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Are you a registered Geologist or Engineer? Yes _____ No _____

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My signature attests that, to the best of my knowledge, I meet the academic and practice requirements for the membership class requested and that all information on this application are true and correct.

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REVISED October 2016

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The Carolinas Chapter 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 large quantities of 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 clients in an informal setting.

Our sponsors provide the financial support that allows us to have reasonably priced dinner meetings, host seminars, provide discounted dinner meeting costs for students and teachers, underwrite the cost of newsletters and our web site, provide geoscience mentors for students and young professionals, and support science education tools to our teachers and in our schools. 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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