

# GEO NEWS

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

WINTER 2015



## IN THIS ISSUE

Women in STEM ..... 6

Paul Santi, AEG President to Speak at Next Meeting ..... 8

No Way to Manage a Coast ..... 15

## SAVE THE DATE

AEG Winter Meeting  
January 21, 2016  
Draught Charlotte

**GEONEWS Winter 2015**  
**Issue Date: September 21, 2015**  
**TABLE OF CONTENTS**

**Articles and Reports**

AEG and Women in Science *by Jennifer Thomas*.....6  
 Association of Women Geologists Past and Present *by Jane Gill-Shafer* .....6  
 Paul Santi, 2016 AEG President to Speak at Winter Meeting .....8  
 Photos and Memories from the Yadkin Valley *by Sue Buchanan*.....10  
 No Way to Manage a Coast *by Dr. Robert S. Young* ..... 15

**Columns and Regular Features**

Message from the Chair *by Madeline German* ...3  
 GeoRamblings *by Dr. Charles Welby* .....5  
 Education..... 15

**Board Business**

Treasurer’s Report *by Eric Cross*.....4  
 Annual Board of Directors Meeting ..... 14

**Forms and Flyers**

Calendar of Events .....21  
 AEG Membership Application .....23  
 Sponsor Application .....26

**Thanks to our Sponsors!**

**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, 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

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**AEG Carolinas Section Website** [www.aegcarolinas.org](http://www.aegcarolinas.org)

**AEG National Website** [www.aegweb.org](http://www.aegweb.org)

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**Cover:** (Jennifer Thomas) Women attending the November meeting

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**MESSAGE FROM THE CHAIR***By Madeline German, PG**Section Chair—AEG Carolinas Section*

Greetings Carolinas Chapter!

The Annual meeting that took place this September in Pittsburgh, PA was an overwhelming success for the organization. Many members from the Carolinas were able to attend and present. This was the first conference that had more abstracts submitted than we were able to fit on the schedule; start planning now to get your abstract in for Kona 2016. We also began use of a new conference app that allowed conference participants to load their desired presentation schedule, share pictures and view conference maps and events.

This September at the Annual Board Meeting the board voted to approve the updated Articles of Incorporation and Bylaws that include the former Constitution. The entire membership had the opportunity to vote, and these documents were approved by the membership in December. This moves AEG from the Section model to the Chapter model; however, locally there will not be noticeable changes. If you have any questions about the Chapter model or any of the changes in the bylaws please contact me.

In November, the Carolinas Section was a major sponsor of the North Carolina Science Teachers Association meeting in Winston Salem, NC. We distributed 400 AGI Earth Science Toolkits to teachers from across the state, and funded two awards that recognize exemplary accomplishment in earth science education: the Outstanding Earth Science Educator (OESE) Award and the Outstanding Earth Science Teacher (OEST) Award. This year's recipient of the OEST award was **Rebekah Fuerst**, an earth science teacher at Parkwood Middle School in Union County, NC. The OESE winner was **Jo Wallace**, an elementary teacher at J.Y. Joyner Elementary Magnet School, in Wake County, NC. Special thanks to **Susan Kelly** for handing out the toolkits and representing AEG at the conference.

The fall section meeting was held at the Natty Greener in Greensboro, NC on November 12<sup>th</sup>. **Malcolm Schaeffer** presented "Piedmont Groundwater System – the Transition Zone between Regolith and Bedrock: Existence and Characteristics". In his talk he discussed his quantitative assessment of borehole data from six locations in the Carolinas Piedmont Province.

Our next Section meeting is scheduled for Thursday, January 21, 2016. **Paul Santi**, the current AEG President and Professor and Department Head for the Dept. of Geology and Geologic Engineering at the Colorado School of Mines, will be giving a presentation titled "Cultural and Economic Aspects of Hazard Mitigation: Debris Flow and Landslide Examples." I look forward to seeing you there!

In November **Sue Buchanan** sent out a short survey to participants who attended the Reed Gold Mine and Yadkin Valley Field Trips. If you have not yet, please fill this out and send it back to **Sue**. If you have attended one of our earlier field trips or have suggestions for new locations with potential contacts for future events, we would love to hear your suggestions. Planning for 2016 is in full swing and I am very excited to see what new adventures Sue has planned for the Carolinas. If you have not had a chance to attend one of these awesome events, make time in 2016.

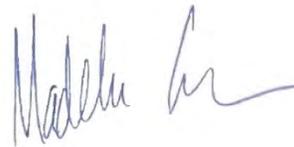
Huge thanks to all of our 2015 section sponsors! Our annual section sponsors allow us to provide activities and outreach opportunities to our membership and the public. For 2015, **Rick Kolb** successfully recruited 23 sponsors, with annual contributions totaling approximately \$7,445! Thanks to **Rick** for all of his hard work, and thanks to all of our sponsors whose contributions give the Carolinas Chapter the opportunity to support local geologists and earth science education. **Walt Plekan**, is our new Carolinas Sponsorship Chair. Please contact **Walt** about new sponsorship opportunities and renewal.

If you have recently graduated or are interested in becoming more involved with AEG, I suggest joining one of the many committees or Technical Working groups. The committees are always looking for members and you can pick a niche that fulfills a personal interest such as educational outreach or chapter support. (<http://www.aegweb.org/?page=OperationalComms>) Technical working groups focus on one specific area such as landslides, or coastal hazards. These groups provide members the opportunity to focus on a topic of interest with members across the country. (<http://www.aegweb.org/?page=TechnicalResources>)

I am also excited to announce in 2016 we will be presenting our first Carolinas Scholarship. This scholarship will be awarded to an undergraduate student enrolled in a Geology or Geoscience Program at an accredited university in North or South Carolina. To learn about the fund, donate or apply, please visit the AEG Foundation website. (<http://www.aegfoundation.org/>)

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.

Best,



Maddie German, PG  
maddie@smithgardnerinc.com  
AEG Carolinas Section Chair

## AEG CAROLINAS SECTION 3Q TREASURER'S REPORT

*By Susan Kelly, Outgoing Section Treasurer*

AEG Carolinas Section Treasurer's Quarterly Report  
July 1, 2015 to September 30, 2015

BALANCE As Of July 1, 2015	
Checking Account	\$16,215.60
Savings Account	\$16,690.85
	\$32,906.45
INCOME	
Meetings, Field Trips, and Courses	
Social (Drake Landing)	\$520.00
Section Meeting (Raleigh)	\$935.00
Fall Field Trip (Wine Tour)	\$1,230.00
Geochemistry Course	\$6,350.00
Section Meeting (Asheville)	\$424.00
Member Dues	
Membership Dues from National	\$380.00
Sponsorships	
Haiti Fund	\$200.00
Interest	
Savings Account	\$2.10
SUBTOTAL - INCOME	\$10,041.10
EXPENSES	
Banking Fees	
Credit Card Reader Fees	\$10.41
Go Daddy Transaction Fees	\$90.61
Go Daddy 2-year Fee	\$256.50
Meeting Expenses	
Social (Drake Landing)	\$417.30
August Section Meeting (Raleigh)	\$1,849.45
Fall Meeting (Asheville)	\$1,755.35
Fall Field Trip (Wine Tour)	\$104.86
Geochemistry Course	\$120.00
SCAEP/AEG Meeting	\$100.00
Donations	
DESE Award - Jo Wallace	\$250.00
DEST Award - Rebekah Fuerst	\$250.00
Additional Expenses	
Amplifier for Meetings	\$213.49
SUBTOTAL - EXPENSES	\$5,417.97
BALANCE As Of September 30, 2015	
Checking Account	\$20,836.63
Savings Account	\$16,692.95
TOTAL	\$37,529.58

## GEORAMBLINGS

By Charles W. Welby

I remember hearing a recording of the Grand Canyon Suite composed by *Ferde Grofe* way back in the last century. Never having visited the Grand Canyon at that point in my life, I learned later that the music conveyed well the greatness of the geologic feature. When I did finally get to the Grand Canyon on one of my wife's and my trips from the east coast to the west coast in our early adulthood, the music, what I remembered of it, slowly confirmed the visual aspect of this important geologic feature on the earth's surface.

Today there is a better understanding of its origins. Recent publications have focused on the sand bars of the Colorado River and their behavior over the years.

Some of you perusing these words may have taken a float down the canyon and camped on the sandbars. Friends of mine who have made the trip describe the thrill associated with the trip, not only the mechanics of the logistics required to make the trip but also the scenery and development of a better understanding of the feature. One also gains an appreciation of the adventure that John Wesley Powell, the first Director of the USGS, when he made the initial trip through Canyon in 1869.

One time I did hike partway down into the Canyon and out again as there was insufficient time in our travels for me to make the trip to the bottom, spend a night or two and then hike back out. In our group there was a gentleman and his son. The son was barefooted, and the Ranger-Naturalist did not want to let them make the hike down into the canyon. The father pointed out that they were from Arkansas and owned a farm there. The son ran around barefoot most of the time. When the Ranger-Naturalist looked at the son's feet, he saw a pair of very much callused heels about 1.5 inches or so thick. So he let the family make the hike. (Talk about barefoot living!!!!)

We hiked about half-way down into the canyon, stopped and had a good look into the canyon and over to the opposite side, took some pictures, and climbed back out of the Canyon. Today there are more observation points to look into the Canyon than there were when I was there, and if one happens to have a flight across that part of the world, a wonderful view of the Canyon may sometimes be had. Sometimes the pilot crew of the airplane will point out the view of the canyon.

QED

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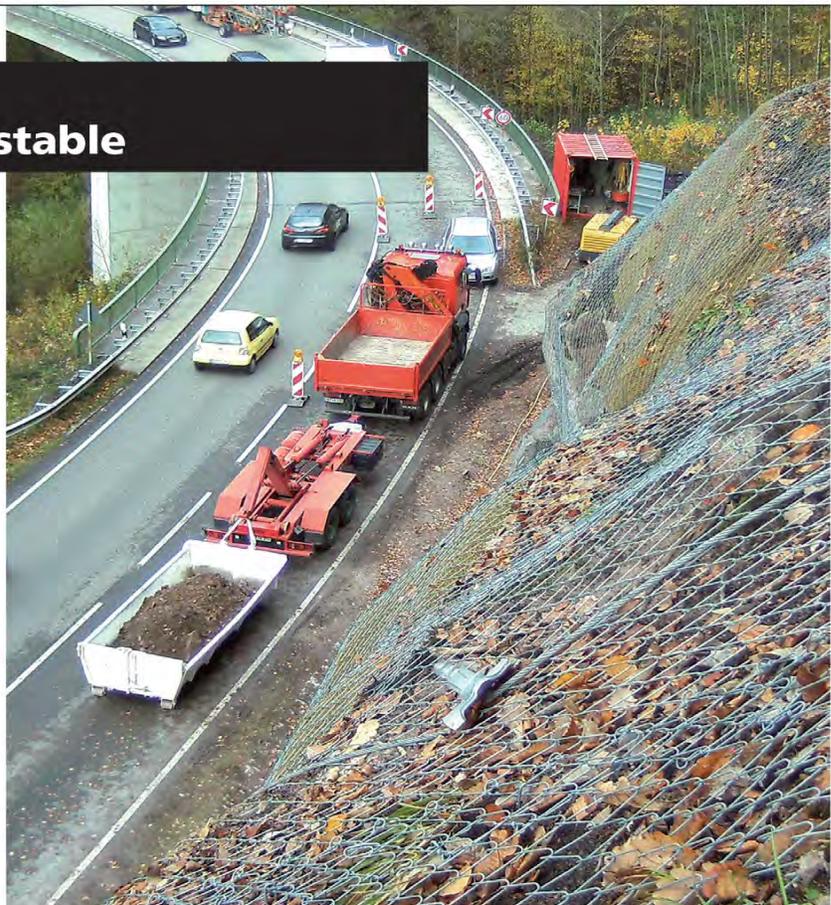
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## AEG and Women in Science

Jennifer Thomas, PG, Editor

Women in STEM, or science, technology, engineering, and math, have been the topic of a national conversation lately. STEM fields have traditionally been male-dominated and sometimes are perceived as unwelcoming to women.

AEG is part of a positive change. The cover picture for this issue gathers all the women who attended the last AEG meeting. AEG does not have the stated purpose of being specifically a feminist organization, yet it supports and encourages women in the geosciences. AEG simply assumes without question that male and female geoscientists are equal. Women volunteer for and are accepted for leadership positions. Madeline German is our sitting Chair. Jennifer Bauer, who graced our cover recently, was honored for her professional accomplishments. AEG does student outreach and welcomes students at meetings and events. Female students with an interest in geosciences can meet women who are practicing as engineers, geologists, and environmental scientists and know that these careers are open to them. These students may find mentors and role-models at AEG.

Lastly, some of our members are earth science teachers who can nurture a love of science in girls before they get to the college level. Teachers can help get rid of harmful perceptions or cultural ideas that girls aren't expected to be good at math or that science fields are unfeminine.

There may still be more men than women in geosciences and other STEM fields. Fewer girls than boys may be interested and that's fine. However, we can show girls what fascinates us. We can lead by example. We can continue to do exactly what we're doing.

## Association of Women Geoscientists, Past and Present

Jane Gill-Shaler, PG

As a woman studying geology in the early 1980's, one of my friends asked, "Why? You'll probably never get a good job. It's a man's field." Well, I was studying it because I found that I *liked* it. Making a living at geology wasn't part of the plan, as I was retired from my own business and had a small, steady income from investments. I was older, too, in my late 40's, and wasn't interested in a career path. But my advisor at San Francisco State University suggested I join a recently established organization, the Association for Women Geoscientists, so I could meet other women geologists. What an eye opener!

The first meeting I attended was at a restaurant on the San Francisco Peninsula. It was crowded, noisy, and about 40 women geologists were present, from mineral specialists, oil geologists, government employees, environmental specialists, professors, and everything in between. I sat next to the speaker, an environmental specialist working for a multinational organization, and she was most kind and welcoming, convincing me to join AWG that night.

I attended meetings regularly for several years, and eventually volunteered my services as secretary, treasurer, and chapter president. I also worked on the newsletter for the Bay Area Chapter of AWG for 5 or 6 years. Volunteering taught me a lot about organization, about working with a diverse group of people, and about the value of networking. And sure enough, I ended up getting a job with a local environmental engineering firm, and working there for about 10 years until moving to North Carolina in 1999.

One of the projects our Chapter did was to provide women geologists for the "Expanding Your Horizons" conferences, which are designed to introduce 5th-8th grade girls to careers in STEM. Several of us designed and built portable surface "water wells" to introduce girls to the concept of water levels and the movement of subsurface water and the transport of contaminants. Other members talked about their career paths, and answered questions from these inquisitive girls. The girls really enjoyed the fact that here were women working in geologic fields, their very presence a powerful indicator of the possible.

So, here is a little about their history, from their website. AWG was founded in 1977 in the San Francisco Bay Area, with approximately 50 members. These early members often met in each other's homes to discuss their research activities and career situations. Within a few years, the number of San Francisco Bay Area members had increased to over 100. Women from other parts of the country learned about AWG through its published newsletter and many outside the Bay Area began to join. The first official chapter formed in 1980 when about 40 women in Denver became associated with the Bay Area group. Within a few months the Denver group was well established

(Continued on page 7)



**Brian C. Bauer**

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(Continued from page 6)

and women in several other cities began to start chapters. The Bay Area served as Association headquarters during this growth period. As more chapters formed, the need for a representative Association structure became apparent.

During 1981 and 1982 a series of meetings was held to determine the details of electing a representative Board of Directors. Under the capable leadership of Jessica Donovan, who was serving as President of both the Association and the AWG-Bay Area Chapter, the details of such a structure were finalized. The members of the 1982-83 Executive Committee were the first officers elected by all members of the AWG organization. Vicki Cowart of the Denver Chapter was elected to serve as the first President of the expanded Association. In 1983, AWG incorporated in the State of California as a nonprofit mutual benefit corporation organized under Section 501(c)6 of the IRS code. Also in 1983, the AWG Foundation was established as a Section 501(c)3 non-profit public benefit corporation. Currently, AWGF offers scholarships and grants for graduate and undergraduate students, and also at least one scholarship specifically for women who are returning to the workforce after raising their families.

In 1985, AWG became a member society of the American Geological Institute, and in 1988, an associated society of the Geological Society of America. In April of 1987, in honor of the Association's 10th Anniversary, AWG held

its first convention in San Francisco, the birthplace of the organization. Today, AWG has over 1,000 members who are either affiliated with one of its regional chapters or prospective chapters, or are Members-At-Large. There are AWG members in 48 states as well as several foreign countries.

A number of years ago, I became a life member of AWG, and although I have become inactive since moving to North Carolina and becoming an active member of AEG, I still treasure my early experiences with AWG, and would encourage the at-large members in our state to start a local chapter. There are a lot of women geologists here who would be really effective in encouraging young girls to enter the geosciences!



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## Paul Santi, 2016 AEG President to Speak at January Meeting



### Dinner Meeting

### *The Carolinas Section of the Association of Environmental & Engineering Geologists*



**Guest Speaker: Paul Santi**  
**2016 AEG President**  
**Presentation:**

### *Cultural and Economic Aspects of Hazard Mitigation: Debris Flow and Landslide Examples*

Dinner and Talk: 5:00-9:00 PM on Thursday, January 21,  
2016

Draught Charlotte  
Downtown Charlotte, North Carolina

#### Meeting Details

**Place:** Draught <http://www.draughtcharlotte.com/>  
601 S. Cedar Street, Charlotte, NC  
28202

**Date:** Thursday, January 21, 2016

**Time:** 5:00-6:30 PM socializing begins, 6:30  
Dinner, 7:30 Presentation  
**Cost:** AEG members \$30, non-members \$40,  
public-sector employees \$15, teachers  
\$10, students **free** with college ID. Note  
– There will be a full bar available dur-  
ing the meeting (cash and credit/debit  
cards accepted)

**Reservations:** You can register and prepay for the  
meeting under the News and Events Section of our website  
at <http://aegcarolinas.org/>. Alternatively, you can make  
reservations with Rebecca Tinnel at [rtin-  
nel@shieldengineering.com](mailto:rtin-<br/>nel@shieldengineering.com)

**Deadline:** To ensure sufficient food is ordered,  
please make your reservation by 5:00 PM on Thursday,  
January 14, 2016.

### Presentation Abstract

This presentation calls attention to vulnerable groups who are disproportionately affected by debris flows and landslides. These populations tend to be economically restricted to live in relatively inexpensive and more dangerous locations; which are often topographically cramped due to expansion and development; and they have limited influence and power to bring about mitigation efforts. Technical issues have long been the focus of debris flow hazard reduction, but there is strong indication that socio-cultural issues are at least as important for effective hazard and risk reduction efforts. The key elements for success identified by those working in these communities include sensitivity to the type of relations and level of trust given to authority figures, importance of historical land ties, relative importance of socio-cultural values versus analytical decisions, cultural barriers even for translators, and sensitivity to the ethics, rights, and influence of the residents. A review of several debris flow disasters reveals some common elements, such as such as the difference between hazard awareness and hazard appreciation, the usefulness of rainfall thresholds as warning indicators, and the increased danger of events occurring at night. Another critical element is the recognition that land use restrictions are often ineffective, as unauthorized communities will spring up quickly in closed areas because they have nowhere else to live. Socio-cultural awareness may result in selecting designs that 1) focus on reducing risk rather than moving people out, 2) are simple and use local materials, local construction techniques and skills; 3) recognize limited financial means; 4) have minimal maintenance requirements, exposure to vandalism and scavenging, and misappropriation of resources; and 5) capitalize on local techniques of dealing with other hazards, such as flooding, earthquakes, and landslides. Because of the difficulty in predicting and controlling landslides and debris flows,

*(Continued on page 9)*

(Continued from page 8)

mitigation systems should employ multiple elements to enhance the chance of success. These can include education of the local populace, avoidance and warning to the degree possible, some combination of channelization and interception of debris, controlling drainage and runoff of water, modifications to house design and layout, and hillside treatment in disturbed areas. Examples will show how these systems can be tailored to fit widely varying socio-cultural settings.

### Speaker's Résumé

Paul Santi is the 2016 AEG President. He is also the Department Head of the Department of Geology and Geological Engineering at the Colorado School of Mines, where he has been on the faculty for 14 years. Previously, he taught for 6 years at the Missouri University of Science and Technology, and worked for 6 years as an engineering consultant in San Francisco and Denver. His recent research has focused on analysis, prediction and mitigation design for debris flows, landslide dewatering and analysis, engineering geology pedagogy, and general geologic hazard analysis. He holds Bachelor's degree in Geology and Physics from Duke University, an MS in Geology from Texas A&M, and a PhD in Geological Engineering from the Colorado School of Mines.



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## Photos and Memories from the Yadkin Valley

*Sue Buchanan, Field Trip Chair*



It was a beautiful fall weekend in Yadkin Valley wine country during the AEG Fall Field Trip to Thurmond, Hamptonville, and Flint Hill, North Carolina. This two day field trip was hosted by Professor Stephen Harper of Eastern Carolina University, Professor Marlene McCauley of Guilford College, and Jane Gill-Shaler of Gill Editing Online. These three volunteers helped a group of geo-professionals and their family and friends learn about local geology, topography, and climate and how all of these and more affect growing grapes in North Carolina, wine making and production, and how to truly understand the meaning of wine tasting.

The field trip started out on Friday evening with Prof. Marlene McCauley giving us a tutorial on the science of wine and what our senses (sight, smell, and taste) tell our brains about the wine (Do I like it? Would I buy a bottle?). Marlene teaches the class “Terroir: the Science of Wine” and quizzed our noses on different smells that are found in white and red wines. Some of us found out that we need to take Marlene’s class; while others did quite well and their noses didn’t fool them. Prof. Stephen Harper also introduced us to hard apple ciders produced by McRitchie Winery & Ciderworks.

On Saturday, we visited three wineries: Jones von Drehle Vineyards and Winery, Dobbins Creek Vineyards, and Shadow Springs Vineyards. Jones von Drehle (JvD) was established in 2007 and started planting vines on pastureland and woodlands in 2009. At this winery, we tasted 11 wines, even their newly released 2013 Tempranillo, and had lunch. Then we took a walking tour of the winery with the JvD wine maker, Dan Tallman, seeing the stainless steel wine vats, stored wine in oak barrels, and the chemistry lab where wine is tested and tasted. We finished the walking tour in the vineyard where Marlene and the JvD vineyard farmer taught us how soil, bedrock, regional and local climate, elevation, topography, slope, and placement of the vines with respect to the sun all affect the production and quality of the grapes. The second stop took us to Dobbins Creek Vineyards which started planting vines in 2002 on family owned tobacco and pastureland. We tasted 9 wines and learned that taste of the same type of wine can change from year to year due to environmental impacts on the grapes, like precipitation. And due note, their 2011 Ram Cat Red (Estate Grown Cabernet Sauvignon and Merlot) is named for their resident cougar that roams their property (EEISH!). We ended the day at Shadow Springs

*(Continued on page 11)*

(Continued from page 10)

Vineyards that was founded in 2005 on pastureland. The vineyard is set up on an open lyre trellis system (“Y” shaped) which allows the vine to split into two sides controlling the vigor of the vine and gives a larger harvest on a normal year. We tasted 9 wines at Shadow Springs, even their Shortcake, which is a strawberry wine.

A vineyard tour, wine tasting, and lunch buffet at Flint Hill Vineyards on Sunday ended out the field trip weekend. This historic residence and farm has been in the family for five generations, which is shown throughout the residence by the many old family photographs. Flint Hill Vineyards opened in 2005 and currently has 8 wines available for tasting.

For those of you who would like to visit these amazing family owned and operated vineyards, their addresses once again are:

- Jones von Drehle Vineyards and Winery, 964 Old Railroad Grade Rd, Thurmond NC 28683
- Dobbins Creek Vineyards, 4430 Vineyard View Lane, Hamptonville, NC 27020
- Shadow Springs Vineyards, 5543 Crater Road, Hamptonville, NC 27020
- Flint Hill Vineyards, 2133 Flint Hill Road, East Bend, NC 27108

AEG would like to thank Marlene, Steve, and Jane for sharing their expertise in the science of wine, and for all their hard work and volunteered time putting together a delightful field trip. Many field trip attendees enjoyed this trip. Andy Prusienski writes: “On behalf of myself and my wife Jeanine...this trip was well planned and well thought out; we found it to be both entertaining and educational. Thank you to all who were a major part of this wonderful trip. We would like to add that if you plan any more trips similar to this one please let us know we would love to be a part of it.”



Prof. Marlene McCauley tested our noses by adding different aromas to one base white and red wine during our Friday evening tutorial on the science of wine.



Dan Tallman, wine maker at Jones von Drehle Vineyards and Winery, talking to us about how the grapes are made into wine, and how the wine is stored, tested, and tasted in the winery.



Prof. Marlene McCauley, Prof. Stephen Harper, and the Jones von Drehle’s vineyard farmer discussing the many important factors that affect the production and quality of the grapes.

(Continued from page 11)



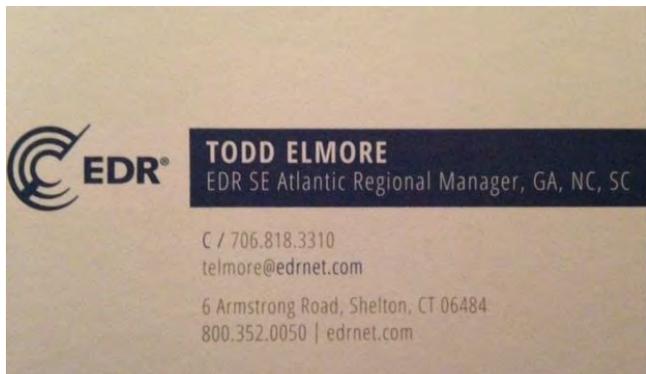
Lunch and live bluegrass at JvD



Prof. Marlene McCauley talking to us about the grape vine trellis and vine stalk at the Flint Hill Vineyards (Sunday).



Stephen Harper and Marlene McCauley at the Friday night session





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## Annual Board of Directors Meeting, September 26-27, Pittsburgh

*Madeline German, Carolinas Section Chair*

We went through the lawyer reviewed version of the articles of incorporation and bylaws. The BOD voted to approve both the updated articles of incorporation and this version of the bylaws that incorporates the former Constitution. The revised documents should be available online and in print for voting by the end of the year. We are still working toward new regional directors making up the BOD at the 2016 annual meeting in Kona.

We worked some on the transition policy and revisions to existing AEG policy. Part of this included work on establishing duties for the Regional Director role. Revising policy will be the primary focus of the Mid-Year BOD meeting.

Two notable items were changed in the budget:

Annual meetings were added to the budget revenue, at an amount to be determined each year. The goal is to use the annual meeting as a source of significant revenue and to plan future meetings accordingly.

Deposits to the licensure fund, which are deducted directly from dues, will not show up as a line in the budget due to potential legal implications.

2018 – IAEG meeting in San Francisco needs help planning. As of the BOD meeting Sarah Kalika still would like people to help on the planning committee, regardless of what section. The individual sections/chapters should all help to advertise. They are planning for a minimum of 1000 people.

All the operational committees need members, they generally have low participation and several need leadership roles.

Technical working groups need support, Landslides are doing ok, but they would like to revitalize the

coastal hazards and karst groups. All leadership is encouraged to recommend members, especially recently graduated student members to participate and revitalize these groups.

The technical working groups will be used to plan the second conference of the year, typically to be held in the spring. For 2016 it will be naturally occurring asbestos in CA, still working out the details. 2017 will be the 3<sup>rd</sup> NA Landslide Symposium at the Hotel Roanoke in VA. Jenn Bauer is helping to plan. Carolinas should advertise and help as needed since we are nearby and the topic is relevant to our membership.

Preliminary stats from the Pittsburgh meeting: approximately 415 attendees, 31 student volunteers, 190 delivered presentations and 22 posters. So far, positive feedback on field trips and short courses.

It is time to start advertising for KONA 2016.

The majority of the meeting was spent reviewing the revised bylaws, the transition plan for the BOD (from section chairs to regional directors) and updates to the budget.



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**No Way to Manage a Coast**  
*Dr. Robert S. Young*  
 reprinted with  
 permission from the Raleigh News &  
 Observer

Is North Topsail Beach (NTB), North Carolina the most poorly managed beach community in the country? If not, they certainly seem to be taking a good shot at it.

I have watched in dismay as the town has struggled to preserve a small stretch of oceanfront property at all costs. In doing so, they have destroyed their beach and created significant access issues along more than a half-mile stretch of shoreline. Perhaps even more disconcerting is that this damage has been done with the permission of The NC Division of Coastal Management and the NC Coastal Resources Commission.

The problem is that beaches like NTB, located adjacent to inlets, can experience significant fluctuations in shoreline position. That’s why the State of North Carolina has designated special Inlet Hazards areas to regulate development in this highly exposed stretch of coastline.

The most severe problems at North Topsail Beach are happening adjacent to New River Inlet. There are 20+ structures here that should be in the water. But, within the last year, NTB got permission to build a sandbag seawall in the ocean in order to push the shoreline seaward in front of the oceanfront properties. This wall required a special variance from the Coastal Resources Commission because it is larger than permitted by state law. North Topsail Beach also requested to install a temporary geotube in front of the sandbags to protect the sandbag wall that is protecting the houses.

The geotube was supposed to be removed upon completion of the wall, but as is usually the case, the town refused because they were worried about the total collapse of a sandbag wall built literally in the ocean. Lucky for the town, the Coastal Resources Commission was willing to play along with the charade, allowing the geotube to stay until next year (at least).

As a long time observer of the coast, I am skeptical that the structure will ever be removed. No state regulator or agency will have the courage to order a reduction in protection along a shoreline with a structure already in place.

As a result of all this, the beach has been destroyed along more than a half mile stretch of shoreline. Now, it may seem logical to try to support the property values of a row of oceanfront homes, but in my opinion this all holds barred battle to save the economic value of the oceanfront neglects the needs and importance of all other properties in that coastal community. All property owners in a barrier island community have a right to expect access to the primary amenity of that community—the recreational beach. If the town destroys that amenity and severely limits access to pedestrians, the town is choosing to support the property values of one small group of homeowners over the property owners of the entire community.

I fear that the story of North Topsail Beach may become the story of coastal management in many North Carolina communities. Lax oversight and a desire to return decision making to the localities will prove to be economically disastrous and waste public funds. The best example is the most recent. North Topsail Beach was given a Public Beach and Waterfront Access grant to build a parking lot to improve public access to the beach (it’s hard to climb over all those sandbags). The parking lot was constructed this spring. It is already falling into the sea.

It is very difficult to understand that the Town, their contractors, and the Division of Coastal Management all believed that it was acceptable to spend taxpayer funds to build new infrastructure on a shoreline with clear evidence of severe erosion just around the corner.

To make matters even worse, the Town now intends to request a variance to put sandbags in front of the parking lot that they built only a few months ago! It is currently illegal to protect a parking lot with sandbags. It is time for the CRC and the Division of Coastal Management to assume the responsibilities they were entrusted with and ground North Topsail Beach— no more variances.

*(Continued on page 16)*

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	<b>Jacksonville, FL Lab:</b> <a href="mailto:ENCOJAX@encolabs.com">ENCOJAX@encolabs.com</a> Tel: 904-296-3007 Fax: 904-296-6210	<b>Corporate Office:</b> 10775 Central Port Drive, Orlando, FL 32824

(Continued from Page 15)

Ultimately, it is time for the citizens of North Topsail Beach (and other similar communities) to understand that protecting the oceanfront at all costs is not fair to the vast majority of property owners who's homes are located in more reasonable locations. How much personnel time and real dollars has the Town had to spend to protect a very small part of its tax base? And how has the complete degradation of the public beach (everyone's economic resource) impacted property values, rental income, and the visitor experience.

It is also time for the CRC and the DCM to take a hard look at the variances they grant. Protecting the property values of some can seriously degrade the amenity that others expect. Coastal communities are far more than that one line of oceanfront homes.

The State of North Carolina was once the national leader in wise coastal management. I urge everyone to look at the northern end of NTB and decide if this is the vision we have for the fate of all North Carolina beaches. I surely hope not.

*Editor: Dr. Robert S. Young is a Professor of Geology in the Department of Geosciences and Natural Resources at Western Carolina University and is Director of the Program for the Study of Developed Shorelines. For more information about this program, visit <http://psds.ecu.edu>.*

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## EDUCATION

### Undergraduate Scholarships Available for Geology Majors

*Paul Weaver, Carolinas Section  
Scholarship Fund Chair*

The Carolinas Section is pleased to announce that, beginning in the 2016-2017 academic year, we will award scholarships to deserving undergraduate students that are majoring in geology at colleges and universities schools in North Carolina and South Carolina. These scholarships will be administered through the AEG Foundation with the award recipients chosen by the Carolinas Scholarship Committee, which will be comprised of five members of the Carolinas Section.

The eligibility requirements for the scholarship are as follows:

Undergraduate student must be a geoscience major enrolled in a school in North or South Carolina.

Student must be an AEG Student Member.

Student must provide academic transcripts.

Student must provide an approximately 500-word essay that describes why they believe they deserve the scholarship and how they will use it (e.g., for tuition, field camp, books, etc.).

The scholarship application must be completed on the AEG Foundation website ([www.aegfoundation.org](http://www.aegfoundation.org)) by February 1 of each year.

The number and amount of scholarships awarded each year will depend upon the amount of money available in the Scholarship Fund. The Carolinas Section has established the fund with seed money in the amount of \$10,000. We plan to conduct on-going fundraising for the Scholarship Fund throughout the year. In the meantime, if you would like more information about the fund, and the fund charter and description, this information can be found at <http://www.aegfoundation.org/funds/carolinas.php>. If you would like to make a donation to the fund, please go to <http://www.aegfoundation.org/pdf/AE>

*(Continued on page 18)*

### North Carolina Science Teachers Association Professional Development Institute (NCSTA-PDI)

*Randy Bechtel*

#### North Carolina Outstanding Earth Science Teacher and Educator (OEST and OESE) Award Winners

The awards were presented during the NCSTA-PDI award ceremony by the N.C. Geological Survey's Randy Bechtel, who coordinates the state's OEST and OESE program. In addition to the plaque, each winner receives \$750 from multiple co-sponsors including the Carolinas Section of AEG, which is the only sponsor to fund both awards. The winners also receive a \$100 gift certificate to the N.C. Geological Survey Store. In special attendance for the award ceremony, Denise Hallett a representative for the N.C. Aggregates Association, a co-sponsor to the OESE award, co-presented the award to the winner.

#### AEG sponsored exhibit booth

The AEG booth saw a steady flow of teachers this year. I did not get many chances to stop down to the exhibit booth, but when I did the kits were flowing out of the booth into teacher's hands. The teachers are always gracious and surprised when they find out they get the kits for free! This is a great way to be involved with teachers and I know it is appreciated.

#### Attendance at the Professional Development Institute

I am happy to announce that the attendance was much better than last year's PDI. I don't have the final attendance numbers yet but the initial registration was over 800!! The NCSTA Board is working hard to keep improving numbers with a new website, consistent promotion and the addition of an Elementary Science Literacy Workshop at this year's PDI.

*(Continued on page 18)*



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EDUCATION

(Continued from page 17)

GF%20Donation%20Form.pdf. Since the scholarship has just recently been approved by the AEG Foundation, the Foundation website may not show the Carolinas Scholarship in the list of scholarships available. If this is the case and you would like to make a donation, please write-in "Carolinas Scholarship Fund" and your donation amount.

The Carolinas Scholarship Fund Committee and the Carolinas Section Board of Directors are excited to have finally established the Carolinas Scholarship Fund since this has been something we have wanted to do for many years. We look forward to awarding scholarships to deserving students in 2016 and for many more years into the future.

Paul M. Weaver, P.G.  
Chair – Carolinas Section Scholarship Fund

(Continued from page 17)

2016 NCSTA-PDI is in October and back in Greensboro, N.C.

The PDI is on the move in time and space! We will be much earlier in the calendar year than I can remember. So please keep this in mind for AEGs involvement in next year's event. The PDI will be October 20-21, 2016. And we will be back in Greensboro, N.C. at the Koury Convention Center. The NCSTA Board has not determined a theme yet for the next PDI but we will be meeting early in the new year and I should have something to report then.

I wanted to send a personal thank you to the Carolinas Section of AEG for the continued support of geoscience education. I know all of you have little precious time to devote to outside activities but every member I have met

(Continued on page 19)



The 2015 North Carolina Outstanding Earth Science Teacher (OEST) winner is Ms. Rebekah Fuerst of Parkwood Middle School in Union County. (L- R: Randy Bechtel, Rebekah Fuerst).



The 2015 North Carolina Outstanding Earth Science Educator (OESE) winner is Ms. Jo Wallace of J.Y. Joyner Magnet Elementary School in Wake County. (L-R: Randy Bechtel, Jo Wallace, Denise Hallett).

(Continued from page 16)

at the NCSTA-PDI always has a great big smile on their face and great enthusiasm for interacting with the teachers. In my opinion, that passion is just as important as material support and positively promotes the geosciences as a profession.

Sincerely Randy Bechtel.



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## CALENDAR OF EVENTS - 2015

### Geological Events in the Carolinas

Courtesy of AEG Carolinas Section – [www.aegcarolinas.org](http://www.aegcarolinas.org). Last updated September 21, 2015

Send updates/corrections to Josh Hanks, Dunclee & Dunham, [josh@duncleedunham.com](mailto:josh@duncleedunham.com)

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

**Date: Tuesday, January 5, 2016 (meetings are held on the first Tuesday of the month)**

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter

Location: 6:30-8:00 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 300; Raleigh

Details: [www.meetup.com/EWB-USA-RTP-Professional-Chapter/](http://www.meetup.com/EWB-USA-RTP-Professional-Chapter/)

**Date: Tuesday, January 19, 2016**

Event: Quarterly meeting of the North Carolina Board of Licensing Geologists

Location: Starts at 9 AM at the office of Upton Associates; 3733 Benson Dr. Raleigh, NC; morning session open to the public

Contact: [ncblg@bellsouth.net](mailto:ncblg@bellsouth.net)

**Date: Thursday, January 21, 2016**

Event: AEG Winter meeting

Presentation: Paul Santi, AEG President, Cultural and Economic Aspects of Hazard Mitigation: Debris Flow and Landslide Examples

Location: Draught <http://www.draughtcharlotte.com/> 601 S. Cedar Street, Charlotte, NC 28202

Time: 5:00-6:30 PM socializing begins, 6:30 Dinner, 7:30 Presentation

Cost: AEG members \$30, non-members \$40, public-sector employees \$15, teachers \$10, students free with college ID. Note – There will be a full bar available during the meeting (cash and credit/debit cards accepted)

Reservations: You can register and prepay for the meeting under the News and Events Section of our website at <http://aegcarolinas.org/>. Alternatively, you can make reservations with Rebecca Tinnel at [rtinnel@shieldengineering.com](mailto:rtinnel@shieldengineering.com)

Deadline: To ensure sufficient food is ordered, please make your reservation by 5:00 PM on Thursday, January 14, 2016.

**Date: Thursday, January 21, 2016 (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: 6:00pm Social with Pizza & Beverages, 7:00pm Presentation

Location: Jim Hamilton-L.B. Owens Airport – 1400 Jim Hamilton Boulevard, Columbia, SC

Contact/RSVP: Chuck Clymer at (803) 212-0054 or [crcllymer@terracon.com](mailto:crcllymer@terracon.com)

**Date: Tuesday, February 2, 2016 (meetings are held on the first Tuesday of the month)**

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter

Location: 6:30-8:00 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 300; Raleigh

Details: [www.meetup.com/EWB-USA-RTP-Professional-Chapter/](http://www.meetup.com/EWB-USA-RTP-Professional-Chapter/)

**Date: Thursday, February 18, 2016 (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: 6:00pm Social with Pizza & Beverages, 7:00pm Presentation

Location: Jim Hamilton-L.B. Owens Airport – 1400 Jim Hamilton Boulevard, Columbia, SC

Contact/RSVP: Chuck Clymer at (803) 212-0054 or [crcllymer@terracon.com](mailto:crcllymer@terracon.com)

(Continued on page 22)



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(Continued from page 21)

**Date: Tuesday, March 1, 2016 (meetings are held on the first Tuesday of the month)**

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter

Location: 6:30-8:00 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 300; Raleigh

Details: [www.meetup.com/EWB-USA-RTP-Professional-Chapter/](http://www.meetup.com/EWB-USA-RTP-Professional-Chapter/)

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Location: Jim Hamilton-L.B. Owens Airport – 1400 Jim Hamilton Boulevard, Columbia, SC

Contact/RSVP: Chuck Clymer at (803) 212-0054 or [crcllymer@terracon.com](mailto:crcllymer@terracon.com)

**Date: March 18, 2016**

Event: ASBOG Geology Exam

Details: Deadline to apply for the exam is February 2, 2016 (and preapproval to take the exam before that)

Location: McKimmon Center, NC State University, Raleigh

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

**Date: March 31- April 1 2016**

Event: Geologic Society of America Annual Southeastern Section Meeting

Location: Columbia Convention Center; Columbia, South Carolina

Early Registration Deadline: February 29, 2016

Registration: <http://www.geosociety.org/Sections/se/2016mtg/registration.htm>

Information: <http://www.geosociety.org/Sections/>



**W. Martin M. Johnson, P.G.**

Vice President

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[se/2016mtg/](http://www.ncblg.org/se/2016mtg/)

**Date: April 2016 – date to be determined**

Event: Spring Meeting and elections, Ground Water Professionals of North Carolina

Speaker: To be announced at [www.gwpnc.org](http://www.gwpnc.org)

Location: 6:00 social, 7:00 dinner, 8:00 presentation

**Date: April 7-April 9, 2016**

Event: ASBOG Spring COE Workshop

Location: TBD

Contact: [ncblg@bellsouth.net](mailto:ncblg@bellsouth.net)

**Date: April 12, 2016**

Event: Quarterly meeting of the North Carolina Board of Licensing Geologists

Location: Starts at 9 AM at the office of Upton Associates; 3733 Benson Dr. Raleigh, NC; morning session open to the public

Contact: [ncblg@bellsouth.net](mailto:ncblg@bellsouth.net)

**Date: August 6, 2016**

Event: ASBOG Annual Meeting

Location: Video Conference and Physical

Contact: [ncblg@bellsouth.net](mailto:ncblg@bellsouth.net)

**Date: August 9, 2016**

Event: Quarterly meeting of the North Carolina Board of Licensing Geologists

Location: Starts at 9 AM at the office of Upton Associates; 3733 Benson Dr. Raleigh, NC; morning session open to the public

Contact: [ncblg@bellsouth.net](mailto:ncblg@bellsouth.net)

**Date: September 18-24, 2016**

Event: AEG Annual Meeting

Location: Waikoloa Beach Marriott Resort & Spa; 69-275 Waikoloa Beach Drive; Waikoloa Beach, Hawaii 96738

Contact: [contact@aegweb.org](mailto:contact@aegweb.org)



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(Continued from page 22)

**Date: September 25-28, 2016**

Event: Geological Society of America Annual Meeting

Location: Denver, Colorado

Technical Session and Short Course Proposal

Deadlines: February 1, 2016

Information: <http://www.geosociety.org/meetings/2016/>

**Date: September 30, 2016**

Event: ASBOG Geology Exam

Details: Deadline to apply for the exam is August 16, 2016 (and preapproval to take the exam before that)

Location: McKimmon Center, NC State University, Raleigh

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

**Date: November 4-November 6, 2016**

Event: ASBOG Fall Workshop

Location: Lawrence, Kansas

Contact: [ncblg@bellsouth.net](mailto:ncblg@bellsouth.net)

**Date: November 15, 2016**

Event: Quarterly meeting of the North Carolina Board of Licensing Geologists

Location: Starts at 9 AM at the office of Upton Associates; 3733 Benson Dr. Raleigh, NC; morning session open to the public

Contact: [ncblg@bellsouth.net](mailto:ncblg@bellsouth.net)

**Date: September 2017 (dates to be determined)**

Event: AEG Annual Meeting

Location: Denver, Colorado

**Date: September 2019 (dates to be determined)**

Event: AEG Annual Meeting

Location: Asheville, North Carolina



## Geophysical Services

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# MEMBERSHIP APPLICATION



## ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

### MEMBER:

- New Member Dues – \$95.00** First year of membership only.
- Full Member Dues – \$140.00\***

Applicants for Member Class, including Full and New Members, 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, the applicant shall be practicing in the field of Engineering Geology, Environmental Geology or Hydrogeology.

*\*Section Dues - Section dues are charged to all Full Members, invoiced separately. More information regarding Section dues can be found at [www.aegweb.org](http://www.aegweb.org).*

### AFFILIATE:

- Affiliate Dues – \$100.00**

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

### TEACHER:

- Teacher Dues – \$35.00**

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.

### STUDENT:

- Annual Dues - FREE**

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.

### INTERNATIONAL:

- International Member Dues – \$35**

Applicants shall hold the same requirements as for Member Class. International Members receive (online ONLY) the E&EG Journal, Annual Directory, Annual Meeting Program with Abstracts and the AEG NEWS.

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

**Date of Birth:** \_\_\_\_\_  
*Required to authorize payment*

**Preferred Address:**  Home  Work  School  
\_\_\_\_\_  
\_\_\_\_\_

**Preferred Phone:**  Home  Work  School  Mobile  
\_\_\_\_\_

**Preferred E-mail:**  Home  Work  School  
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**Alternate Address:**  Home  Work  School  
\_\_\_\_\_  
\_\_\_\_\_

**Alternate Phone:**  Home  Work  School  Mobile  
\_\_\_\_\_

**Alternate E-mail:**  Home  Work  School  
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**Desired Class of Membership:** \_\_\_\_\_

**Annual Dues Amount\*:** \_\_\_\_\_  
*\*Section Dues not included. A separate invoice will be mailed to you.*

**Payment Method:**  
 Check Enclosed  
 Visa  Master Card  Discover  AMEX

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*(If not provided above, please provide card address)*

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**Certification/Authorization:** \_\_\_\_\_  
*(Signature)*

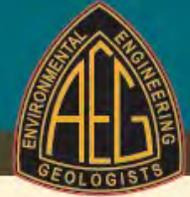
My signature attests that, to the best of my knowledge, I meet the academic and practice requirements for the membership class I have requested and that all entries on this application are true and correct. I also authorize AEG to charge my credit card for the dues payment, if I selected the credit card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

**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: 720-230-4846  
[aeg@aegweb.org](mailto:aeg@aegweb.org) • [www.aegweb.org](http://www.aegweb.org)



# ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

Connecting Professionals, Practice and the Public



## Student and New Graduate Member Application

Let the Association of Environmental & Engineering Geologists (AEG) show you the great benefits to being a part of the geology profession! **AEG is geology in practice.** Join us and see why our members LOVE their jobs!

### Benefits of Student Membership Include:

- Eligibility for **Scholarships** that provide funding for field camp, field studies, academic studies and travel to present at national meetings.
- **Discounts** for attending AEG's Annual and local Section Meetings, field trips, and short courses (sometimes you can attend for **FREE**).
- **Networking** opportunities to potentially **meet YOUR future employer!** One member noted, "Every job I have had was a result of shaking hands at an AEG event!"
- **Free online access** to *Environmental & Engineering Geoscience*, co-published with the Geological Society of America, *AEG NEWS*, and *AEG's Annual Meeting Program with Abstracts*.
- **STUDENT MEMBERSHIP IS FREE!**
- PLUS, as **AEG's gift to you for graduating**, your first year of Professional Membership when you renew as a Full Member will be reduced by \$45.00.

### Application Form

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

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

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

E-mail (Current Institutional Provider): \_\_\_\_\_

E-mail (Non-Institutional Provider): \_\_\_\_\_

Institution (College/University): \_\_\_\_\_

Anticipated Graduation Year: \_\_\_\_\_

Please check one:  Student (free)  New Graduate  
\*(1st year, only \$95.00)

*\*Note: AEG will contact New Graduates upon receiving the application for payment and to complete the application process.*

**Submission** Send this form to:

Association of Environmental & Engineering Geologists,  
1100 Brandywine Blvd Suite H, Zanesville, Ohio 43701  
Phone: 1-844-331-7867 (toll free); Fax: 740-452-2552  
Email: [contact@aegweb.org](mailto:contact@aegweb.org); Website: [www.aegweb.org](http://www.aegweb.org)



**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 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.

**Silver Sponsor (\$250):**

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

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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.

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

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

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

**Titanium Sponsor (\$600):**

Same as Platinum, but with a FULL PAGE ad in GeoNews. Limited to 2 Sponsors per year.

**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 send to Jennifer Thomas, AEG Carolinas newsletter editor at [jen@jenntecllc.com](mailto:jen@jenntecllc.com). 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 PLUS Section Sponsorship, \$600/year
- \_\_\_\_\_ Platinum Section Sponsorship, \$500/year
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Please enclose a business card or email ad in jpg, pdf, or doc to Walt Plekan at [walt.plekan@aecom.com](mailto:walt.plekan@aecom.com).

**MAKE CHECK OUT TO AEG CAROLINAS**

Snail mail form and payment to:

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(Modified 1/7/15)

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(Continued on page 28)

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