

GeoNews

Newsletter of the Association of Environmental & Engineering Geologists,
Carolinas Chapter

2009, 2011, 2013, 2016, and 2017 AEG Chapter of the Year

SPRING 2023



IN THIS ISSUE

Carolinas Chapter Update.....	3
AEG President Visits the Carolinas Chapter.....	4
March Dinner Meetings.....	9
NC Science Fair Needs Judges.....	13
NCGS ROCKin' Geology Party.....	23

SAVE THE DATES

**2023 Darcy Lecture Series in
Groundwater Science
Birds Fly South Ale Project
Greenville, SC
March 23, 2023
AEG Dinner Meeting
Clouds Brewing
Raleigh, NC
March 30, 2023**

GEONEWS SPRING 2023**Issue Date: March 22, 2023****TABLE OF CONTENTS****Columns and Regular Features**Message from the Chair *by Jennifer Thomas*3**Articles and Reports**AEG President Visits the Carolinas Chapter *by**Rick Kolb*.....4NC Science & Engineering Fair Needs Judges *by Rick Kolb*.....15**Board Business**3-7-2023 Meeting Minutes *by Laura Elliott*18**Forms and Flyers**

March Dinner Meeting in Greenville9

March Dinner Meeting in Raleigh.....11

ITRC Microplastics Guidance.....21

Calendar of Events.....22

NCGS/NCDEQ ROCKin' Geology Party.....25

Sponsor Application.....27

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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 AE 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 Sept 1, issue date Sept 21

Winter—deadline Dec 1, issue date Dec 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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Cover: Highway 12 that runs along the North Carolina eastern coast in Dare County (Pea Island) washed out after either Hurricane Isabel in 2003 or Hurricane Irene in 2011. The nearest dark gray house was eventually moved and featured in the movie, *Nights in Rodanthe*. According to Stan Riggs, "The remaining houses shown in the picture have not collapsed into the sea yet. This particular beach segment would collapse almost every year and sometimes 3 times a year — it is now where the new Jug Handle bridge has been built out into Pamlico Sound."

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Message From the Chair

By Jennifer Thomas, P.G., Carolinas Chapter Chair

Greetings Carolinas Chapter!

This time of year is when growing season begins. Temperatures are warming, flowers are blooming, leaves are coming out. The chapter is feeling that energy and coming to life as well. We had a big crowd in Charlotte this past January. If you missed the meeting, don't worry. The Carolinas board is planning a year packed with activity throughout the region. This month ends with east and west meetings with environmental geology topics. Dr. Alicia Wilson will present at Birds Fly South Ale Project in Greenville, South Carolina on March 23. Stan Riggs is speaking at Clouds Brewing in Raleigh March 30. This issue contains all the information you need to attend. Plans for a September meeting in Asheville and October meeting in Greensboro are also in the works. We expect to have the details in the summer issue.

Last September, the Asheville meeting featured a presentation on the Sparta, NC earthquake. We'll have the opportunity to go see the fault, as Arthur Merschat of USGS leads a field course May 20.

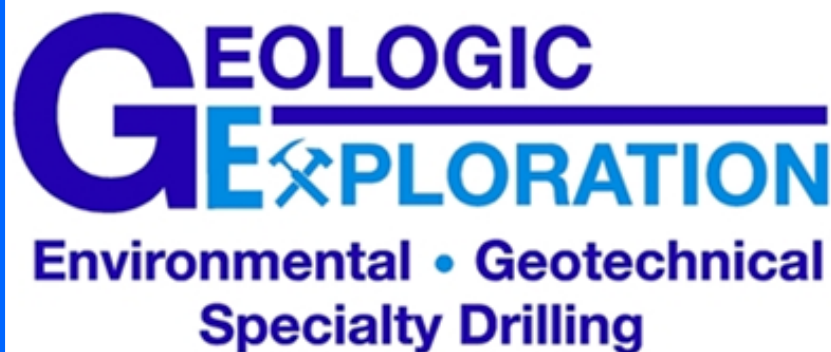
A goal for 2023 is getting South Carolina more involved. Carolinas Chapter has mostly operated in North Carolina and neglected South Carolina. We want to truly live up to our name as Carolinas Chapter; it's not the North Carolina chapter. In addition to the Greenville meeting coming very soon, we are putting together a combined meeting and field course in Columbia. There is a possibility we'll put on a Charleston event as well. Stay tuned. Eventually we'd like to support the formation of a dedicated South Carolina chapter. By including South Carolina in the near future, perhaps we can inspire passionate people in that effort.



Jennifer Thomas, P.G.

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AEG Carolinas Chapter Chair



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AEG President Visits the Carolinas Chapter

By Rick Kolb, Former Carolinas Chapter Chair

Nate Saraceno conducted his first visit as President of AEG to the Carolinas Chapter in January. Typically our chapter hosts the president each year and often arranges presentations at universities during the visit. Nate drove down to the Carolinas from Pittsburgh and was able to shuttle between five universities and our winter chapter meeting in Charlotte.

Nate began his campus visits after driving 400 miles south on January 23, 2023, ending up in Johnson City, Tennessee, where he presented to department chair **Dr. Arpita Nandi** and students in the Department of Geosciences at East Tennessee State University. Though Tennessee is not in our chapter, Dr. Nandi brings students to our chapter meetings in Asheville, which is only 60 miles from campus, closer than the 280 miles to the meetings of the Nashville chapter. Nate presented his landslides talk, and because all the schools he visited also requested a discussion on careers, his talk at ETSU and at the other schools touched on the track of his career and other thoughts on finding a job. ETSU generously hosted Nate for dinner that evening and for his stay at the historic Carnegie Hotel in Johnson City.



Nate Saraceno with Dr. Arpita Nandi



Nate Saraceno with ETSU Department of Geosciences Students

(Continued on Page 5)

AEG President Visits the Carolinas Chapter *(continued from page 4)*

On Tuesday, January 24, Nate drove 220 miles from Johnson City to Columbia, South Carolina, where he presented in the late afternoon to students at the University of South Carolina. **Dr. Gene Yogodzinski**, Professor and Associate Director of the School of the Earth, Ocean & Environment at USC, arranged Nate's visit. Our chapter paid for pizzas that we served during Nate's presentation. Afterwards, Dr. Yogodzinski took out Nate and some students for beverages at a nearby pub and further discussion on AEG and careers in environmental and engineering geology. Nate spent the night at a hotel in Columbia, paid for by our chapter, which has numerous annual sponsors that enable us to pay for meals and lodging for visits by the AEG president and Jahns Lecturer.

On Wednesday, January 25, Nate drove the 100 miles from Columbia to Furman University in Greenville for a lunchtime presentation with pizza to department chair **Dr. Suresh Muthukrishnan** and students in the Department of Earth, Environmental, and Sustainability Sciences. Nate spent time talking to students after his presentation and then drove the 35 miles for a late afternoon presentation with pizza to **Scott Brame** and students in the Department of Environmental Engineering and Earth Sciences at Clemson University. Scott took Nate and some students out for dinner after his presentation. Nate spent the night in the James F. Martin Inn, the "Official Clemson University Hotel" on the campus.



Nate Saraceno's Furman University presentation



Nate Saraceno with Clemson University Department of Environmental Engineering and Earth Sciences Students

(Continued on Page 6)

AEG President Visits the Carolinas Chapter *(continued from page 5)*

On Thursday, January 26, Nate drove 140 miles from Clemson to his hotel in north Charlotte, where Rick Kolb picked him up and took him to lunch. After lunch, we drove to the University of North Carolina at Charlotte, where Nate presented a lunchtime talk with pizza to students and faculty in the Department of Geography and Earth Sciences at UNCC. Undergraduate Advisor **Dr. Valerie Reynolds** arranged our visit. We also met up with one of the past coordinators of our visits, Professor Emeritus **Dr. John Diemer**, but we were unable to meet with the other coordinator, Senior Lecturer Jake Armour, who with his wife, Professor Missy Eppes, was on sabbatical this year.



Nate Saraceno's UNC Charlotte presentation

AEG President Visits the Carolinas Chapter *(continued from page 6)*

Rick and Nate drove through downtown Charlotte to the Olde Mecklenburg Brewery & Biergarten, site of our winter chapter meeting. Our chapter had held the past few winter meetings in Charlotte at the U.S. National Whitewater Center but chapter chair Jen Thomas had discovered this brewery (our preferred locations for chapter meetings), where we held a chapter board meeting last summer, and found that they had a private room, in which we held our chapter meeting. We had our social from 5:30 to 7:00, a buffet dinner from 7:00 to 8:00, and Nate made his presentation starting at 8:00. We had 68 in attendance for the chapter meeting (which included 22 students who got into chapter meetings for free), an increase of 25 from our winter meeting last year in Charlotte. Questions were still going to Nate at 9:15, when we had to vacate the room so it could be cleaned up. We hope and expect this attendance trend continues so that we eventually return or exceed pre-Covid attendance of nearly 100 at chapter meetings in Charlotte and Raleigh. Our chapter has approximately 320 members, approximately half of which are students. **Brad Worley**, our chapter's Student Liaison, annually schedules Visiting Professional presentations at universities in the Carolinas, and students often join AEG as a result of those presentations.



*Nate Saraceno's presentation at Old Mecklenburg
Brewery & Biergarten*

On Friday, January 27, Nate drove the 500 miles home to the Pittsburgh area, safely concluding his first presidential trip. The Carolinas Chapter thanks Nate for the visit. We hope other chapters will have similar success taking Nate to college campuses to talk to active and potential student members, who will one day lead AEG and our profession.



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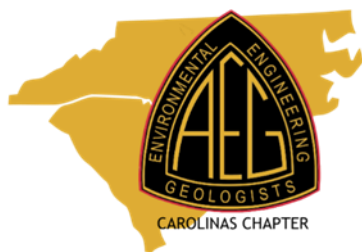
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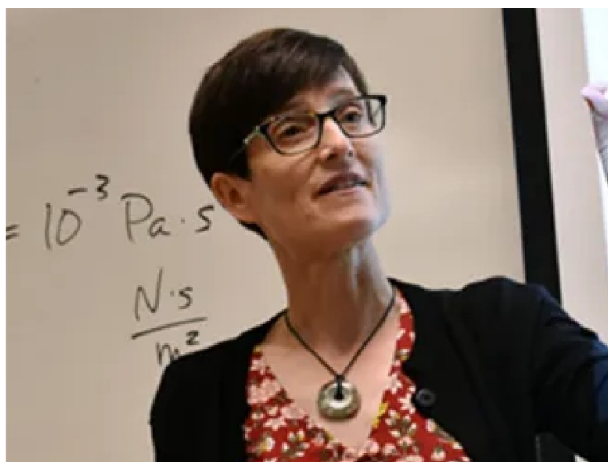
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*The Carolinas Chapter of the
Association of Environmental & Engineering Geologists presents:
2023 Darcy Lecture Series in Groundwater Science & Dinner Meeting in
Greenville, SC*

Guest Speaker: Dr. Alicia Wilson



Meeting Details

Place: Birds Fly South Ale Project at Hampton Station, 1320 Hampton Avenue, Greenville, SC 29601

Food: MooHogz Craft BBQ (brisket, ribs, collards, mac n' cheese, beans, coleslaw)

Date: Thursday, March 23, 2023

Time: 5:30 PM socializing begins, 7:00 buffet dinner, 8:00 Dr. Wilson's talk

Cost: AEG and ASCE members \$35; non-members \$45; public-sector employees and teachers \$20. **Students free** w/ college ID.

Reservations: Please make reservations and prepay by 6:00 PM on Monday, March 16, 2023 at <http://aegcarolinas.org/news/>. Registration will be \$5 more at the door.

Students— register by March 20, 2023 by emailing meeting planner (Jonathan Gerst) at igerst@peakhydrogeologic.com

Continuing Education: 1 CE credit for Dr. Wilson's presentation.

Presentation

SUBSEAFLOOR HYDROGEOLOGY: MOVING BEYOND WATERSHEDS

The field of submarine groundwater discharge (SGD) was launched in the 1990s by the remarkable discovery, via naturally-occurring isotopic tracers, that saline groundwater was discharging to the South Atlantic Bight in very large volumes. Subsequent studies confirmed that saline groundwater discharges to the Atlantic Ocean in volumes that rival river discharge. All available evidence indicates that this saline groundwater is highly enriched in nutrients compared to river water, so the nutrient contributions of this submarine discharge exceed that of river discharge. These findings have been slow to find widespread acceptance, however, because it has been exceedingly difficult to confirm this flow by means other than the original isotopic tracers. This discharge does not occur near the shoreline, and no conceptual models for SGD far from shore existed.

This changed recently when new studies using heat as a tracer identified clear pulses of groundwater discharge 10-15 km offshore in the South Atlantic Bight. This talk investigates this 20-year mystery and the recent discoveries that suggest that it may be time to rewrite chemical budgets for the coastal ocean.

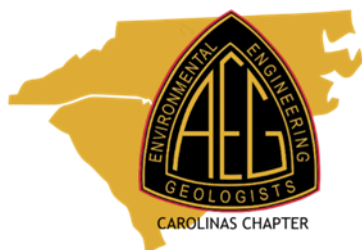
Dr. Wilson's Biography

Alicia Wilson is a professor of hydrogeology in the School of the Earth, Ocean, and Environment at the University of South Carolina. She specializes in coastal hydrogeology, with a particular focus on coastal ecohydrology and submarine groundwater exchange. A fellow of the Geological Society of America, Wilson has served as the chair the GSA Hydrogeology Division and the Director of the School of the Earth, Ocean, and Environment. She is a recipient of the University of South Carolina's Mungo Undergraduate Teaching Award. Wilson holds a Ph.D. from the Johns Hopkins University, an M.S. from Stanford University, and a B.A. from Dartmouth College. She held a National Research Council Postdoctoral Research fellowship at the USGS in Reston, Virginia, and held a postdoc at the University of California, Santa Barbara.

Darcy Lecture Series

The Henry Darcy Distinguished Lecture Series in Groundwater Science fosters interest and excellence in groundwater science and technology. It was established in 1986 and named in honor of Henry Darcy of France for his 1856 investigations that established the physical basis upon which groundwater hydrogeology has been studied ever since. Each year, a panel of scientists and engineers invites an outstanding groundwater professional to share his or her work with their peers and students through this lecture series. The Darcy Lecture Series is most often presented at universities and professional associations throughout the world.





Dinner Meeting
The Carolinas Chapter of the
Association of Environmental & Engineering Geologists
Presents Guest Speaker:



Dr. Stanley R. Riggs

Coastal Marine Geologist

AEG Carolinas presents a special geologist, probably not known well (if at all) by many of the younger members of our profession. However, most professionals in North Carolina are probably aware of the issues presented to our coastline by rising sea levels/climate change, and the damage from hurricanes that includes regularly rebuilding parts of NC 12 and renourishing beaches, and how this issue has become political. Come hear Dr. Riggs talk about our changing coastline and his view of what the future holds.

Meeting Details

Place: The patio at Clouds Brewing, 126 N. West Street in Raleigh

Date: Thursday, March 30, 2023

Time: 5:30 PM socializing begins, 7:00 buffet dinner, 8:00 Stan's talk

Cost: AEG and ASCE members \$35; non-members \$45; public-sector employees and teachers \$20. **Students free w/ college ID.**

Reservations: Please make reservations and prepay by 6:00 PM on Monday, March 27, 2023 at <http://aegcarolinas.org/news/>. *Registration will be \$5 more at the door.*

Students - register by emailing meeting planner Rick Kolb at rick.kolb1@gmail.com by April 3, 2023.

Continuing Education: The NCBLG has preapproved AEG Carolinas to offer 1 CE credit for Stan's presentation.

(Continued on Page 12)

Dr. Riggs' Abstract

NORTH CAROLINA'S WATERY WORLD: FROM PAST TO PRESENT AND FUTURE

NC's Land of Water coastal system is a world-class mixing basin and transition zone where upland river valleys and coastal plain peninsulas meet the ocean. It is a high-energy intersection of land, water, and air where sunny day calms quickly shift to high energy stages of dynamic change. In our unending rush to conquer the ocean's mobile sand pile — our barrier islands — we tended to overlook the ongoing changes within our vast inner coastal world of estuaries, wetlands, and lowlands. Historical economic-development practices in this coastal system have largely ignored the dynamics of natural change. Centuries of ditching, draining, and clearing wetlands and the more recent development of urban cities on mobile barrier-sand piles have created **unintended consequences** resulting in massive economic losses by ongoing climate change. Within this watery world with its **vast natural resources and extreme dynamics** there are **limits to growth and development** — water is both a critical resource and a harsh dictator!

North Carolina's world-class coastal system has challenged the engineering prowess of many great minds over the past four centuries. Now in the 21st century with rising sea level and exploding coastal populations, North Carolina finds itself in the throes of a **perfect conflict**: an escalating battle between natural storm dynamics that drive coastal change and the economic drive to stabilize and develop the land and water resources. When living within this intersection of land, water, and air, society must adopt a more-humble approach and learn to **live with the changing system dynamics**! There will always be shorelines and associated coastal ecosystems wherever an ocean intersects a land mass — but they just won't be in the same place through time as they move in response to changing climatic and geologic conditions!

Dr. Riggs' Biography

A native of Green Bay, Wisconsin, Stanley R. Riggs joined the ECU faculty in 1967 as one of five new faculty hired to develop programs in geology and marine science. The same year, Riggs, a graduate of Beloit College and Dartmouth College, had completed his Ph.D. in geology at the University of Montana. With funding from North Carolina Sea Grant, Riggs began tracking shoreline erosion rates for the state's coastal region. He founded and directed an interdisciplinary program combining biological and geological studies housed on Roanoke Island and was known locally as "ECU by the Sea."

From the late 1970s through the 1990s, Dr. Riggs expanded his work, conducting studies of mineral resources globally. In this connection, he served as the co-director of an International Geologic Congress, a United Nations project that focused on the natural resources in developing countries.

(Continued on Page 13)

Dr. Riggs' Biography (continued)

In 1983, in recognition of his studies of the North Carolina coast as well as his work on global resources, Riggs received the prestigious Oliver Max Gardner Award from the UNC Board of Governors. In his acceptance speech, Riggs observed that “geology’s contribution to society is its ability to make man aware of the underlying unity of the changing earth system.” In 1994, he was the first recipient of the College of Arts and Sciences’ Distinguished Professor award in recognition of his “stellar achievements” in teaching, advising, research, and professional service. In 1997, he was chosen to deliver the fall commencement address, a rare honor for an in-service faculty.

An exceptionally productive scholar, Dr. Riggs has authored 16 books, 38 book chapters, and over a hundred journal articles. He has received more than 73 research grants, valued at well over \$15 million, from the National Science Foundation, the National Oceanographic and Atmospheric Administration, the U.S. Geological Survey, the Environmental Protection Agency, and numerous state agencies. His current research deals with the ongoing changing climate dynamics (storms and sea level) occurring within North Carolina’s world-class coastal system during the past, present, and future.

Dr. Riggs was on the faculty of East Carolina University for 55 years. Although he retired from teaching in 1999, he was rehired by ECU in 2000 as a Distinguished Research Professor to lead an interdisciplinary program studying coastal systems. The latter initiative resulted in the 2003 publication of *Drowning the North Carolina Coast: Sea Level Rise and Estuarine Dynamics* and the 2011 publication of *The Battle for North Carolina’s Coast: Evolutionary History, Present Crisis, and Vision for the Future*. In 2010, the N.C. Coastal Resource Commission’s Science Panel, of which Riggs was a founding member, released a report, requested by the North Carolina state legislature, on projected sea-level rise over the next 90 years, warning that rising sea levels imperiled the already over-developed coastline. In response, a new legislature rejected the report and instructed the Science Panel to redo the report and restrict its projections to a 30-year timeframe. This political attempt to deny the scientific data and resulting projections caused Riggs to publicly resign his position on the CRC Science Panel in 2017. In 2012, Riggs founded North Carolina Land of Water (NC LOW), a non-profit organization devoted to public education and aiding local communities with sustainable development in eastern North Carolina. Dr. Riggs was awarded the 2021 Francis Parker Shepard Medal for “Excellence in Marine Geology” by the international Society for Sedimentary Geology that was named for the “founder of American Marine Geology.” In 2022, Riggs received the Governor’s “North Carolina Award in Science” for his contributions to the “Land of the Longleaf Pine.”



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The UNC- Chapel Hill Geology Club will be hosting a **ROCK/MINERAL SALE** in the Martin Lounge of Mitchell Hall on Saturday, **March 25th** from **9:30am-3:30pm**. This event will be open to the public, however the EMES community is exclusively invited to our **pre-sale** event the night before the sale (time TBD).

We will have **HUNDREDS** of hand samples and specimens for sale. From crystalline minerals to fossils, we will have a bit of everything. Please attend with **CASH** or **VENMO/CASHAPP** payment available, we will not be able to accept card payments!

If you have any questions or would like to volunteer to help the club organize/operate this event, please reach out to me (jacobmor@live.unc.edu) or Douglas Hill (dhill222@live.unc.edu).

We can't wait to see you there! Be on the lookout for more information closer to the event date!

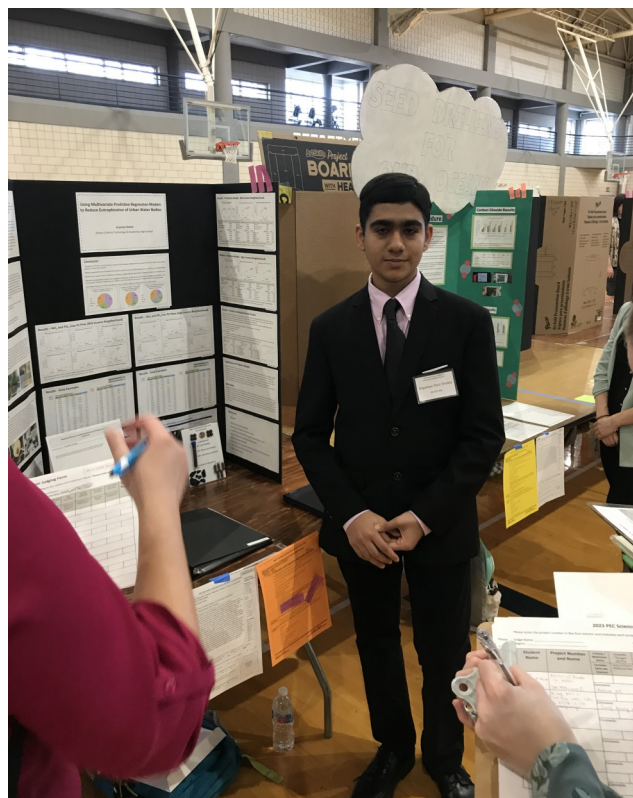
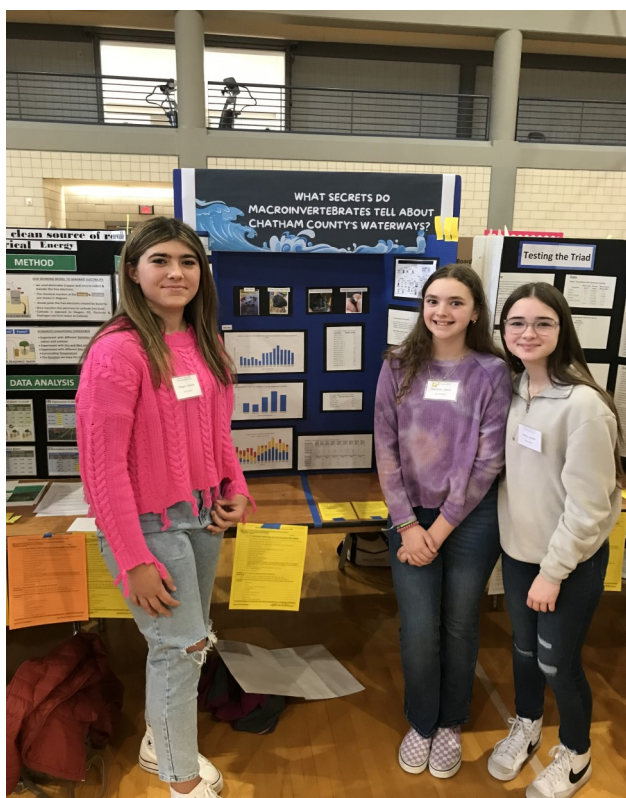
North Carolina Science and Engineering Fair Needs Judges

By Rick Kolb, Former Carolinas Chapter Chair

Last month I volunteered a Saturday in Greensboro to judge earth and environmental science entries in one of North Carolina's ten regional science fairs. We had about 10 judges (but only two were geologists) interview students in grades 6 through 12 in front of their exhibits. These entries were winners of smaller science fairs that moved to the regional competition. I saw some entries that were amazing, thought-provoking, and different. One young woman eighth-grader could go to college tomorrow. Her exhibit was outstanding and she answered all of our questions calmly, clearly, and professionally. We were impressed! The first and second place winners for elementary, middle, and high school now compete for state honors, which will be held on Saturday, March 25th at NC State University.

Some details from the website www.ncsef.org:

Four hundred students in grades 3 -12 from across North Carolina, who have advanced from one of our ten Regional Fairs, will now compete for state honors. Independent student-led research expands their knowledge of a subject and exposes them to the excitement found in discovery and problem solving found in science, engineering, technology, and mathematics fields. Sharing their discoveries promotes the development of communication skills and allows our students to become experts in their area of research. Our goals are to stimulate innovation and creativity in exploring STEM disciplines that will help to encourage the future problem solvers of our nation.



(Continued on Page 16)

NC Science and Engineering Fair Needs Judges *(continued from page 15)*

By Rick Kolb, Former Carolinas Chapter Chair

Here is the schedule for the 25th:

- Between 7:30 am and 9:00 am, students who did not set-up on Friday must check-in and set-up their project.
- NCSEF Welcome begins at 9:15 am for all students, parents, and guests in the Talley Student Union Ballroom.
- STEM Exhibitors begin at 9:30 outside the Ballroom for students.
- Elementary Interview Judging is 10:30 am – 12:00 pm in Carmichael Wellness and Recreation Center.
- Junior and Senior Interview Judging is 12:00 to 1:45 pm in Carmichael.
- Elementary Projects open to the public at 1:30 – 3:30 pm
- Junior and Senior Projects open to the public at 2:00 – 3:30 pm
- Award Ceremonies are all in the Talley Ballroom (will be recorded and hopefully streamed):

Elementary – 2:30 pm

Junior – 3:30 pm

Senior – 4:30 pm



(Continued on Page 17)

NC Science and Engineering Fair Needs Judges *(continued from page 16)*

By Rick Kolb, Former Carolinas Chapter Chair

The fair needs judges, as their website reads:

The success of our local, regional, and state science fairs depends on the quality of judging for the fair. We realize that judging a science fair is a large commitment of time and effort, but the rewards are experience in helping to encourage the next generation of scientists and engineers for our state and country. We encourage all interested individual to assist as judges! A minimum of an undergraduate degree and experience is required, and those with advanced degrees strongly encouraged!!

For those of you in the Triangle, I urge you to consider spending part of Saturday, March 25, talking to some potential future geologists. I am sure you will be surprised about the quality of these exhibits. Details on how to volunteer to be a judge at the Science and Engineering Fair are at:

https://ncsef.stemwizard.com/public_site/judge_register.



Carolina Board Meeting Minutes 3-7-2023, 4:30pm— Microsoft Teams Meeting
By Laura Elliot, P.G.—Carolinas Chapter Secretary



AEG CAROLINAS CHAPTER- BOARD OF DIRECTORS MEETING MINUTES

March 7, 4:30 TO 5:30 PM

1. Call to Order via Microsoft Teams 4:30PM

2. Roll Call

ATTENDEES: PAUL WEAVER, JONATHAN GERST, JENNIFER THOMAS, MEREDITH AMBROSE, WALT PLEKAN, RICK KOLB, JARED WILKE, LAURA ELLIOTT

3. Carolinas Chapter Finances – no new treasurer report. Still in Q1.

Checking: \$875.00

Savings \$14,626.43

Paypal Acct \$241.62

Grand Total: \$15,743.05

Recent expenses included March meeting in Greenville included Nate's visits and for the food.

AEG Deposited \$710 = 71 new members

4. GeoNews – Meredith

Will draft in about a week to send out on 3/21/23. To include last meeting's minutes and content from Nate's visits.

Will include a listing for the need for scholarship committee volunteers.

AEG supports state licensure

5. Sponsor Update – Jared and Walt

No new sponsorships recently

CCI signed up for beer sponsor at Greenville meeting

6. Membership – Rick and Meredith will start contacting people

Will upload list of non-renewals to Slack in case officers know folks to contact directly

Membership Committee – HQ will start adding chapter membership discussion to future chapter support calls.

7. Upcoming Meetings

-Greenville, SC 3/23/23 – Darcy lecturer Alisa Wilson will present (Birds Fly South; MooHogz BBQ)

*Socializing at 5:30pm, Dinner at 7:00pm, Presentation at 8:00pm

*Talk to other groups to publicize– include GWP and ASCE

(Continued on page 19)

Carolina Board Meeting Minutes 3-7-2023, 4:30pm (continued from page 18)**7. Upcoming Meetings (continued)**

-Raleigh, NC 3/30/23 — Stan Riggs speaker at Clouds Brewing

*Rick has sound system

*German buffet chosen and has sides appropriate for vegetarians

-Greensboro, NC 10/19/23 — Jahns Lecturer Vince Cronin and Red Oal

*Likely caterer Pepper Moon buffet; Laura organizing

-Asheville, NC Early September 2023 — Ideas for speakers? Engineering talk?

*Jonathan suggested USGS talk by Philip Prince

*Likely Wedge at Foundation again with BBQ catering

-National Meeting in Portland, OR Mid-September = 9/23/23

-Possible future chapter meetings in Charleston and Columbia, SC

*Scott Howard in Columbia and Will Doar in Charleston (both SCGS)

8. Jahns Lecturer — Which talk do we want

-3 Votes for “How Can Engineering Geology Help Society Meet the Challenge of a Changing Climate”

-Brad will be setting up the school tour; he will not be doing visiting professionals this year

9. Field Courses — Suggestion to call them Field Courses instead of “Trips”

-Arthur Merschat USGS 5/20/23 in Sparta, NC to see the fault

-Scott Howard SCGS suggested the spillway at Lake Murray for a “world-class outcrop”. He thinks permission will not be hard to get. Meeting on Friday night and field trip on Saturday

-Phil Bradley NCGS suggested a fall field trip in Raleigh/eastern NC

10. Card reader

-Jonathan says it worked ok at the Charlotte meeting

-We have quick books reader. It might make sense to invest in Square

11. Social Activities/Communications/Social Media — Adam is not on call**12. Other items**

-Nomination for Chapter of the Year? Paul will coordinate paperwork with Jen.

-The annual meeting in 2026 will be in Chattanooga, TN (Paul)

-The Carolinas Chapter needs to look into sponsorships for the National meeting in Portland, OR; we will have better options the earlier we decide. Sometimes opening session, coffee hours, etc. (Paul) Typically ~\$500-

1000. (Walt)

*<https://www.aegannualmeeting.org/> lists available sponsorships for meeting – suggested 2 tech session breaks in a morning & afternoon. Walt will contact Heather Clark to organize and pay for those. (2 for \$300 each)

(Continued on page 20)

Carolina Board Meeting Minutes 3-7-2023, 4:30pm (continued from page 19)**12. Other items (continued)**

-The AEG Carolinas Scholarship Committee has received 6 applications for the Carolinas Scholarship this year. \$3500 is the plan for the scholarship fund. We need to plan for it. Money in = money out. Paul suggests we have one recipient with the entire budget to make a significant impact for the winner.

*How do we determine who is on the committee and how many members? Add to newsletter.

-Charlotte Happy Hour - Social on 3/15 put on by Engineers and Beers. Speaker is Bivvins who will discuss environmental justice. Rick will send info out for the website and newsletter.

-Next meeting Q2

Adjourned Meeting 5:30 PM

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ITRC— New Microplastics Guidance Now Available!

Microplastics (MP) are ubiquitous in our environment and pose one of the biggest emerging threats to the global environmental community. The science surrounding MP, their potential health effects, and knowledge of their fate and transport is very new and ongoing, with research articles being published at a rapidly accelerating rate. Even techniques and best practices for sample collection and analysis of these tiny particles and fibers are still very much evolving.

[ACCESS THE MICROPLASTICS WEBSITE HERE!](#)

ITRC's Microplastics Team has synthesized the available information on MP into a single comprehensive guidance document, covering everything from ecological effects and mitigation and abatement strategies to environmental distribution!



ECOS

Along with the document, the Microplastics Team has developed a 2-hour Internet-based training, offered live on a quarterly basis starting in March 2023, with recordings available on the ITRC website. For more information or to register, please visit [EPA's Clu-In site!](#)

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CALENDAR OF EVENTS—2023

Geological Events in the Carolinas

Courtesy of AEG Carolinas Chapter—www.aegcarolinas.org. Last updated March 16, 2023

Send updates/corrections to Rick Kolb, rick.kolb1@gmail.com

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

Date: March 23, 2023

Event: AEG Carolinas Chapter Meeting

Location: Birds Fly South Ale Project at Hampton Station; 1320 Hampton Ave.; Greenville, SC

Cost: \$35 for AEG members, \$45 for non-members, \$20 for public-sector employees and teachers; **free** for students w/ ID. **Registration will be \$5 more at the door.**

Details: 5:30-7:00 socializing, 7:00-8:00 buffet dinner; 8:00-9:00 speaker.

Presentation: Darcy Lecture Series in Groundwater Science – Dr. Alicia Wilson, Professor at the University of South Carolina, will present “Subseafloor Hydrogeology: Moving Beyond Watersheds”

Registration: <http://aegcarolinas.org/2023-darcy-lecture-series-in-groundwater-science-dinner-meeting-march-23-2023/>

Location: Zoom meeting

Details/Registration: register via: [meetup.com/EWB-USA-RTP-Chapter/events/cbwwcsydccbjb/](https://www.meetup.com/EWB-USA-RTP-Chapter/events/cbwwcsydccbjb/)

Date: Thursday, April 6, 2023

Event: David S. Snipes/Clemson Hydrogeological Symposium

Time: 7:00 AM to 5:15 PM (remote option available)

Location: Clemson University’s Madren Conference Center, with post-symposium mixer at the Clemson Outdoor Lab

Details/Registration: Opens March 3, 2023 at <https://www.clemson.edu/cecas/departments/ees/symposium/registration/index.html>

Date: March 30, 2023

Event: AEG Carolinas Chapter Meeting

Location: Clouds Brewing; 126 N. West Street; Raleigh, NC

Cost: \$35 for AEG members, \$45 for non-members, \$20 for public-sector employees and teachers; **free** for students w/ ID. **Registration will be \$5 more at the door.**

Details: 5:30-7:00 socializing, 7:00-8:00 buffet dinner; 8:00-9:00 speaker.

Presentation: Coastal marine geologist Dr. Stan Riggs, emeritus professor of geology at ECU, will present “North Carolina’s Watery World: From Past to Present to Future.”

Registration: <http://aegcarolinas.org/aeg-carolinas-dinner-meeting-march-30-2023/>

Date: Wednesday, April 5, 2023

Event: Clemson Hydrogeology Symposium Field Trip

Time: All day

Event: The Brevard Fault Zone and Tallulah Dome in northeast Georgia

Details/Registration: https://secure.touchnet.net/C20569_ustores/web/product_detail.jsp?PRODUCTID=5020

Date: Thursday, April 6, 2023 (chapter meets the first Thursday of each month)

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

Time: 12:00 noon

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(Continued on Page 23)

CALENDAR OF EVENTS—2023 (continued from page 21)

Date: Friday, April 7, 2023

Event: Clemson Hydrogeology Symposium Field Trip (offered twice)

Time: All day

Event: The Brevard Fault Zone and Tallulah Dome in northeast Georgia

Details/Registration: https://secure.touchnet.net/C20569_ustores/web/product_detail.jsp?PRODUCTID=5020

Date: April 12-14, 2023

Event: 2023 Annual Technical Forum on Geohazards Impacting Transportation in Appalachia

Location: Conference April 12, and 13 at the Festival Conference Center at James Madison University, field trip April 14 at the Frazier Quarry in Harrisonburg

Details/Registration: <https://www.jmu.edu/geology/cegga/forum.shtml>

Date: Saturday, April 15, 2023 – Volunteers Needed!

Event: 2nd Annual North Carolina Geological Survey ROCKin' Geology Party!

Time: 11:00 AM – 3:00 PM

Location: West Point on the Eno River, 5101 N. Roxboro St., Durham

Details/Registration: The NCGS ROCKin' Geology Party! is an official NC SciFest event. The event is open to kids of all ages and will be a fun, interactive day of learning about geoscience through guided geology walks, rock bingo, a scavenger hunt, crafting geodes, and learning all about rocks and minerals in our everyday lives. There will even be a food truck to provide all the energy you'll need for this party. We'd like to know you're planning to attend, so please let us know at <http://bit.ly/3J4MNTI> Registration opened on February 14.

Date: May 15-17, 2023

Event: Life of Mine - Maintaining Sustainability Through Geoscience: The Role of Geoscience in Mine Site Regulation, Running, Rehabilitation, Repurposing, Retirement, and Reclamation

Location: Virtual

Details: www.minessymposium.org

Date: Saturday, May 20, 2023

Event: Geology field trip in the Sparta area of western North Carolina

Location: To be announced soon

Cost: To be announced soon

Leaders: Mark Carter and Arthur Merschat, United States Geological Survey

Details: The field trip will focus on the surface rupture from the 9 August 2020, Mw 5.1 earthquake near Sparta, NC, and the results of integrated bedrock and surficial geologic mapping, paleoseismic, geomorphologic, and geochronologic studies. The field trip will involve walking ~ 1km of the surface rupture (Little River fault). We will then examine several outcrops brittle faults, Pleistocene terrace deposits, possible paleoliquefaction sites, and other geomorphologic sites in Sparta, North Carolina. These stops will help frame our discussions on the connections between seismicity, bedrock geology, geomorphology and landscape evolution in the Blue Ridge.

CE credits: To be announced soon

Registration: Go to www.aegcarolinas.org

Date: June 25-28, 2023

Event: 57th U.S. Rock Mechanics/Geomechanics Symposium

Location: Westin Peachtree Plaza; Atlanta, Georgia

Details: <https://atlanta2023.armorocks.org>

Date: July 2023 (date TBD)

Event: How to Prepare and Strategize for the ASBOG® Fundamentals of Geology Exam

Location: Virtual

Cost: Free for AEG members and students, \$20 for non-members

Details: AEG's Student & Young Professional Support Committee presents the fifth FG webinar at 4:00-6:00 PM EDT.

Registration: Go to the calendar at www.aegweb.org to register

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(Continued on Page 24)

CALENDAR OF EVENTS—2023 *(continued from page 22)*

Date: September 19-24, 2023

Event: AEG 66th Annual Meeting – “Hazards in Hindsight...Lessons for the Future”

Location: Portland Marriott Downtown Waterfront;
Portland, Oregon

Details: <https://www.aegannualmeeting.org>

Date: Friday, October 6, 2023

Event: ASBOG FG and PG Exams – **deadline to apply to the NCBLG to take the exams is July 27, 2023**

Location: The 21 Prometric Testing Centers in North Carolina and the 6 in South Carolina

Contact: www.ncblg.org or <https://llr.sc.gov/geo/>

Date: October 15-18, 2023

Event: Geological Society of American Annual Meeting

Location: Pittsburgh, Pennsylvania

Details: <https://community.geosociety.org/gsa2023/home>

Date: October 30 - November 2, 2023

Event: 53rd Annual Southeastern Transportation Geotechnical Engineering Conference

Location: Charlotte, North Carolina

Details: <http://stgec.org/>

Date: Late October or early November, 2023

Event: Carolina Geological Society annual field trip – “The Geology of the Carolina Terrane in Chatham County, North Carolina: Results of the New Geologic Mapping by the North Carolina Geological Survey”

Location: Field trip starts and ends in Durham, North Carolina

Registration: Opens this summer

Contact: www.carolinageologicalsociety.org

Date: September 10-21, 2024

Event: AEG 67th Annual Meeting

Location: Hilton Philadelphia at Penn’s Landing; Philadelphia, Pennsylvania

Date: September 23-27, 2025

Event: AEG 68th Annual Meeting

Location: Westin Chicago River North; Chicago, Illinois



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North Carolina Geological Survey Invites You to Their ROCKin' Geology Party!

By Amy Pitts, P.G., Education and Outreach Coordinator (NCGS, NCDEQ)



Mark your calendars for the 2nd annual ROCKin' Geology Party! sponsored by the North Carolina Geological Survey. This official event of the North Carolina Science Festival (www.ncscifest.org) will take place on April 15, 2023 from 11am – 3pm at West Point on the Eno Park in Durham. This kid-centric day focuses on the fun side of learning about geoscience and will have events like guided geologic walks in the park coupled with a scavenger hunt, games of rock bingo for cool rock prizes, a make-your-own geode-crafting station, and of course, a cool display of North Carolina's finest rocks, minerals, and fossils. The theme for this year's NC Science Festival is Full STEAM Ahead, so to incorporate the arts into our party, we're planning science fair-type, visual displays of "Everyday Geology".

We are recruiting volunteers to create displays showcasing rocks and minerals used in our everyday lives. These displays can be posters, models, dioramas...anything creative you can come up with to showcase rocks and minerals in everyday items. Would you or your creative coworkers or friends like to create a display for our partygoers? Would you like more information? Please reach out to Amy Pitts, PG at amy.pitts@ncdenr.gov.

We are also recruiting volunteers to help us run the party on April 15. Your time and knowledge would be appreciated, not just by the NCGS but by the future geoscientists at our party. Thanks...you ROCK!



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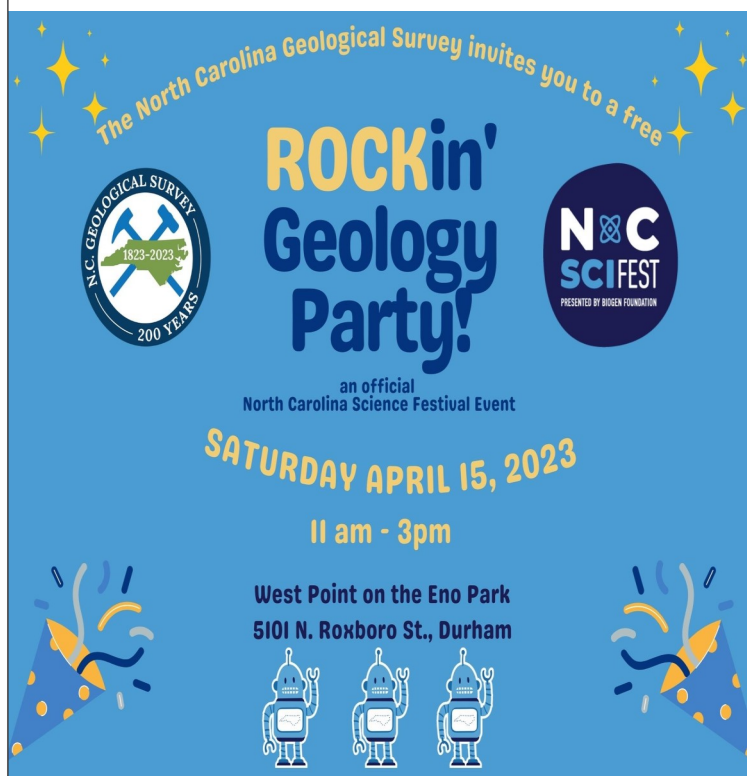
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(Continued on Page 26)

North Carolina Geological Survey Invites You to Their ROCKin' Geology Party! (*cont.*)

Pictures from the 2022 Event





AEG CAROLINAS CHAPTER – SPONSOR INFORMATION

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.

Silver Sponsor (\$275):

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

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

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

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

Web Page: Acknowledgement on the AEG Carolinas Chapter Web Page, www.aegcarolinas.org, with a link to your site.

Gold Sponsor (\$400):

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

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

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

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

Web Page: Acknowledgement on the AEG Carolinas Chapter Web Page, www.aegcarolinas.org, with a link to your site.

Platinum Sponsor (\$550):

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

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

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

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

Web Page: Acknowledgement on the AEG Carolinas Chapter Web Page, www.aegcarolinas.org, with a link to your site.

Titanium Sponsor (\$650):

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 mail to Eric Cross, AEG Carolinas Sponsorship Chair. Please call or email if you have any questions (contact information below).

AEG Carolinas Chapter Sponsorship Form

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**** Sponsors will be listed on the AEG Carolinas Chapter Facebook Page! ****

Thank You Sponsors!

Thanks to our chapter sponsors, without which our meeting dinners would be more expensive, and we couldn't offer reduced rates for the public sector employees and teachers, and free dinners for students. Be sure to tell them thanks for supporting AEG and our profession.

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