

## **AEG Carolinas Dinner/Meeting**

**Thursday, October 24, 2019  
Kau Restaurant, Greensboro, NC**

***The Carolinas Chapter of the  
Association of Environmental & Engineering Geologists  
Presents***

**Guest Speaker:**



**Jonathan Gerst, PG  
Principal Hydrogeologist  
Peak Hydrogeologic, PLLC**

**Presentation:**

**“Hydrogeological Characterization of The Nature Conservancy’s  
McClure’s Bog in Etowah, NC to Support Design of Stormwater  
Management Controls and Wetland Remediation”**

## Meeting Details

- Place:** Kau Restaurant, 2003 Yanceyville Street, Greensboro, NC 27405
- Date:** Thursday, October 24, 2019
- Time:** 5:30 PM socializing begins, 7:00 PM buffet dinner, 8:00 PM Presentation begins
- Cost:** AEG members \$40; non-members \$45; public-sector employees, teachers, and general public \$20, students **free** with college ID.
- RSVP:** Please make reservations with Jacob Hundl ([geotex02@gmail.com](mailto:geotex02@gmail.com)) by 5:00 PM on Monday, October 21, 2019, or reserve and pay by PayPal at our website, <http://aegcarolinas.org/news/>. If you pay at our website, you do not need to send Jacob an email.

**Note!! Attendees that walk in without an RSVP will be charged \$5 in addition to the meeting cost.**

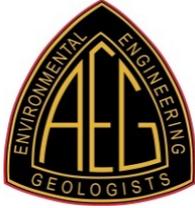
### Abstract for Jonathan's Presentation

Peak Hydrogeologic, PLLC contracted with Wildlands Engineering in 2018 to perform a comprehensive hydrogeological site characterization at the Nature Conservancy's McClure's Bog in Etowah, NC. McClure's Bog is a rare southern Appalachian bog with several protected plant species, which have suffered in recent decades due to increased stormwater runoff, nutrient loading, and invasive species proliferation associated with land development and agriculture on nearby properties. The study included soils evaluations, monitoring well installations, vadose zone permeability tests, monitoring well installations, aquifer hydraulic conductivity slug tests, outfitting of wells with continuous data-logging pressure transducers, water quality monitoring, hydrograph analysis, generation of hydraulic contour and flow direction maps for various water table conditions (baseline, seasonal high, etc.), cooperation with UNCA's Jeff Wilcox and students, and preparation of a report that presents the site conceptual model as needed for design purposes. Equipment installed as part of the study and detailed investigative results also provide The Nature Conservancy with site specific baseline data needed to evaluate the remediation project's post-construction success in treating stormwater and expanding the bog footprint without consequence to existing bog resources. Construction of stormwater management controls began in August 2019. It is anticipated that post-construction monitoring will be performed by UNCA geology students, beginning in early 2020.

### Résumé for Jonathan

Raised in Upstate SC, Jonathan Gerst, MS, LG (NC/SC) developed a strong appreciation for stewardship and the natural beauty of the Appalachian Mountains as gleaned from scouts, outdoor recreation (rock hounding, climbing, mountain biking, kayaking), and a civic-minded family. While receiving a BA in Geology and studying abroad in Germany with Appalachian State University, Jonathan developed a passion for problem solving, hydrogeology, and sustainable development. After starting his environmental consulting career in 2006 with

AECOM in Roanoke, VA, Jonathan returned to graduate school for a MS in hydrogeology with Dr. Maddy Schreiber at Virginia Tech. Upon graduation (2010), Jonathan and his wife served as Peace Corps Volunteers in Morocco. Later the couple moved to Portland, OR where Jonathan toured the world as a hydrogeologist for Golder Associates (2012-2015). After the birth of their first son, Jonathan returned to the Carolinas with his family to work as a branch manager for a small practice in Spartanburg, SC. Following in his ancestor's footsteps (a litany of engineers that maintained their own private practices), in 2017, Jonathan established Peak Hydrogeologic, PLLC (Peak HG) in Tryon, NC to provide the high quality of service he had observed at larger consulting firms with the efficiency and flexibility possible through a smaller operation. Peak HG performs water, soil, and air investigations/reporting for real estate liability screening, industrial and commercial property development, stormwater management design, regulatory compliance, and expert witness testimony.



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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.