

# The South Carolina Association of Environmental Professionals invites you to attend!

**Date:** Thursday, October 1st, 2026  
**Time:** 6:30 pm (social) 7:00 pm (meeting start time) – **Please RSVP**  
**Where:** 148 River Street, Greenville, SC 29601  
**Cost:** No charge for paid members or first-time attendees  
**Speaker:** Johnathan Ebenhack, P.E., P.G., Hydrogeologist, SynTerra  
**Topic:** “Hydrogeologic Evaluations of Fractured Bedrock Systems”

Fractured bedrock is a common component of hydrogeologic systems and can pose unique environmental and engineering challenges that are less common in more homogeneous porous media systems. Fractures and other forms of secondary porosity (e.g., dissolution cavities) typically control the hydraulic properties of the rock and are the primary means of fluid flow and mass transport in bedrock. Understanding the interconnectivity of the fractures and the connection between the fractures and overlying geologic units is essential for development of robust conceptual models of these groundwater systems. Those conceptual models help stakeholders select effective remediation strategies for adversely affected sites with fractured bedrock. Numerous methods and techniques are available to improve the characterization of fractured bedrock. These methods can be used to estimate hydraulic parameters, map the connectivity of fracture systems, and obtain information about the overall conditions of a groundwater system. Techniques range from low-effort, low-cost methods, such as hydrograph analyses, to more involved options, such as large-scale pumping tests. These techniques can often be conducted in tandem to provide more robust evaluations of fractured bedrock systems. Applying these methods and techniques while also understanding their limitations and potential difficulties can improve the evaluation of fractured bedrock systems and save stakeholders time and money when developing effective remedial strategies.

**Johnathan**, P.E., P.G., is a hydrogeologist at SynTerra with more than 17 years of experience in hydrogeological research and the environmental consulting field. He graduated from Clemson University with a Bachelor of Science degree in Civil Engineering and a Master of Science degree in Hydrogeology. During these programs, Johnathan conducted poroelastic groundwater modeling research for evaluating hydraulic pressure changes and subsurface strain associated with mining operations. He also conducted research for hydromechanical well testing which included the development, calibration, and use of multi-dimensional portable extensometers. Since joining the environmental services industry, he has performed work on a range of topics including oil-field regulatory compliance, remediation system design, extraction and injection well rehabilitation, groundwater infiltration, site hydrogeological evaluations and conceptual site model development, and groundwater flow and transport modeling.



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## ❖ Who are we?

- SCAEP was founded in 1992 as a non-profit organization with the following objectives in mind:
- Promote harmony, cooperation, and mutual understanding among environmental consultants, regulatory agencies, educational professionals, business professionals, etc.
- Allow members of the various disciplines represented, both public and private, the opportunity to interact at a social level
- Encourage the transfer of technical information
- Provide a vehicle for continuing technical education
- Foster the highest standards of Professional Ethics within the environmental field
- Combat unfair practices within the environmental field

## ❖ Why Join or Sponsor SCAEP?

- PE/PG Credit Hours!
- Networking with professionals
- Food and drinks (some “fortified”) at each meeting
- A forum to present new research and interesting topics (PGs get 2 credit hours for presenting!)
- Two memberships when you sponsor SCAEP
- We always have fun and the whole group is pretty much AWESOME 😊
- Membership fees are only \$35/calendar year and \$15 for students