

Wednesday, November 13, 2019

Black Lab Pub, Churchill Room • 4100 Montrose Blvd.  
Social Hour 5:30–6:30 p.m.  
Dinner 6:30–7:30 p.m.

**Cost: \$30 Preregistered members; \$35 non-members/walk-ups**

**To guarantee a seat, pre-register on the HGS website & pre-pay by credit card.**

**Pre-registration without payment will not be accepted.**

**Walk-ups may pay at the door if extra seats are available.**

*If you are an Active or Associate Member who is unemployed and would like to attend this meeting, please call the HGS office for a discounted registration cost. We are also seeking members to volunteer at the registration desk for this and other events.*

## HGS Environmental & Engineering Dinner Meeting

**Jim Gooding**  
Geoclimate

# Expansive-Soil Geohazards: An Empirical Index for Texas Counties

A simple index for the relative likelihood of expansive-soil damage, including effects of soil plasticity and drought-flood cycles, is formulated for Texas counties from publicly-available, online data for soil engineering properties and rainfall time-series. A dimensionless scale on which index values rise from zero toward or beyond one (1.0) indicates the counties most likely to experience expansive-soil effects. For the 39 most populous Texas counties, the range of index values is 0.02-1.40 although 18 counties cluster within the range of 0.80-1.20. The index is proposed as a quick screening tool to inform decisions about whether more detailed field or laboratory studies are advisable for expansive-soil geohazards. ■

### Biographical Sketch

**JAMES L. GOODING** is the founder and Managing Director of Geoclimate, LLC, providing quality and risk management consulting for energy, water, science and engineering projects with geotechnical elements. During multiple careers in government and industry, Jim worked as a supervisory research scientist (NASA), industry risk analyst and operations director (Enron; ImpactWeather – now StormGeo), director of commercial services in electric-power and natural gas businesses (Duke Energy) and management consultant for midstream energy businesses (Black & Veatch). His work in industry has included many engagements serving underground natural gas storage operators, leveraging his combined knowledge and experience in applied geoscience, commercial valuation and regulatory compliance. He is a licensed Professional Geoscientist (PG) and is credentialed by the American Society for Quality as a Certified Manager of Quality/Organizational Excellence (CMQ/OE). He earned a PhD with Distinction from the University of New Mexico in Earth & Planetary Science (Geology). Details of his background and experience are available at <https://www.linkedin.com/in/james-gooding-phd/>

