Wednesday, November 14, 2018

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.

Brad L. Cross, PG
WSP

A 2-D Electrical Resistivity Survey of a Pipeline Crossing on the Colorado River, San Saba and Burnet Counties, Texas

Fifteen high-resolution multi-node electrical resistivity river bottom surveys (marine surveys) were completed at a proposed pipeline crossing along the Colorado River in San Saba and Burnet Counties, Texas. The objective of the surveys were to provide preliminary subsurface information along a proposed pipeline right-of-way and to identify geologic hazards such as faults, fractures, and voids in the subsurface that may impact horizontal directional drilling activities.

The resistivity data collected from each survey line was processed and modeled using a two-dimensional inversion modeling package. A penetration depth of approximately 90 feet beneath the river bed was obtained in each of the modeled profiles. The modeled resistivity values ranged from less than approximately 5 ohm-meters in the low resistivity (high conductivity) silty and clayey river bed sediment to approximately 100 ohm-meters and higher in the competent higher resistivity carbonate bedrock along all the profiles. The existence of unstable material in the path of the proposed pipeline would be a potential concern that needed to be evaluated prior to advancing the horizontal directional drilling bore through the right-of-way.

An overview of the data collection methods as well as a brief summary of the results will be provided during the presentation. ■

Biographical Sketch

Brad Cross, is a supervising hydrogeologist with WSP (formerly LBG-Guyton Associates). He has over 35 years experience in the field of groundwater resources, underground injection control, public water supply, and project management. Brad obtained his geology degree from the University of Texas at El Paso in December 1980.

Prior to his 18 years with WSP, Brad spent 15 years with the TCEQ serving as permit writer for numerous injection wells as well as various aquifer storage and recovery projects. He also developed and directed Texas' statewide drinking water protection program and provided site-specific technical assistance to hundreds of communities through the State's Source Water Protection Program.