



ASSOCIATION OF ENVIRONMENTAL AND ENGINEERING GEOLOGISTS

San Francisco Section

Announcing

May 2007 San Francisco Section Meeting

Identifying Environmental Impacts Due to Underground Excavations

Dr. Prem Attanayake, Chief Hydrogeologist, Bechtel Corporation

MEETING DETAILS

Restaurant:

Café de la Paz
1600 Shattuck Ave., Berkeley
(Phone 510.843.0662)

Date and Time:

Tuesday, May 8, 2007
6:00 pm—Social Hour and Sign-in
7:00 pm—Dinner (buffet with Vegetarian options)
8:00 pm—Presentation

Cost: \$35 AEG members, \$40 non-members, \$15 Students

Meal Choice: No choice needs to be specified this time - buffet

Reservations: To RSVP, fax or e-mail Sachiko Tanikawa by **12 PM, FRIDAY, MAY 4**
(fax # 510.268.5099, email: treasurer@aegsf.org) with the following information:

(1) Name (2) Phone number/e-mail

Driving Directions: From the northbound I-80 Freeway, exit at University Avenue and continue east for about 2 miles. Turn left on Shattuck. Go north about 1/3 mile to Cedar. The Café is on the southwest corner of Cedar and Shattuck. Look for parking in the neighborhood.

Parking will be Challenging! Leave extra time to find parking somewhere in the neighborhood. Do not park in the Andronico's lot.

BART: From the Downtown Berkeley station, walk 9 blocks north along Shattuck to Cedar.

Please make reservations by noon FRIDAY, MAY 4; availability cannot be guaranteed after Friday.

****Walk-ins are not guaranteed!****

For financial reasons no-shows and last minute cancellations will be charged.

See next page for abstract and speaker biography.

Identifying Environmental Impacts due to Underground Excavations

Dr. Prem Attanayake, Chief Hydrogeologist, Bechtel Corporation

Dewatering of the groundwater resource and associated reduced flow of surface water features are potential negative impacts when constructing underground facilities. Little work has been done to develop methods for the early detection of environmental impacts on water resources where major underground construction is being undertaken. Recognizing this, prior to construction of two rock tunnels in the southwestern USA, a 3-year preconstruction program was implemented to monitor over 100 wells, springs, and streams in the project area that might be affected. This preconstruction monitoring phase has established data for a hydrologic reference which indicates a high degree of spatial and temporal variability. This variability must be accounted for when trying to identify construction-related impacts. The project area was subdivided into areas of similar characteristics based on geologic and hydrologic features. Measurements from features within each unit were then normalized and aggregated to derive a single representative flow parameter. This representative flow was then correlated to precipitation and major stream flow records to allow for a method of estimating unimpacted flow and groundwater levels during and after construction. Application of this method proved useful in determining and enabling a quick response to construction-related impacts.

Speaker Biography:

Dr. Prem Attanayake is the chief hydrogeologist for Bechtel Corporation. His experience over the last 20 years covers many aspects of hydrogeology, including construction dewatering, water supply, artificial recharge and environmental remediation. He has also provided consulting services through UNDB/UNESCO on issues related to water supply. As an adjunct professor at the San Francisco State University, Dr. Attanayake has taught courses in Groundwater and Groundwater Remediation. Currently he serves as an Associate Editor of "Hydrogeology Journal" published by International Association of Hydrologists. He has authored/co-authored book chapters and over 20 technical publications.

Thank you for the RSVP! See you on Tuesday, May 8th.