October 28 Joint Meeting with Sacramento Section AEG and Sacramento Chapter of Geo-Institute

Speaker: Khaled Chowdhury, PE, GE

Title: Connecting the doTs ......................
       An Integrated Approach for Levee Evaluation and Design

Location: SUDWERK BREWING CO

Sudwerk Brewing Company
2001 2nd Street, Davis, CA
Link to map

$30 for members, $35 for non members, $5 for students
Social hour at 5:30pm, introductions and dinner at 6:30pm, presentation at 7:30pm

Sponsor: ASC

RSVP by going to -- http://www.aegsacto.org/meetings/signup/
or by sending an email to: Tim.McCrink@conservation.ca.gov
Connecting the doTs ....................

An Integrated Approach for Levee Evaluation and Design

The State of Practice in levee evaluation and design has significantly improved in the post-Katrina world. In California, DWR's Urban and Non-Urban Levee Evaluation Projects, and levee design and construction projects undertaken by various Federal, State, and local agencies have resulted in the development of innovative approaches in the evaluation of levees and the design of cost-effective solutions.

An integrated levee evaluation and design approach has been implemented in some recent projects (e.g., such as SBFCA’s Feather River West Levee Project and SAFCA’s North Area Streams Project). A comprehensive geotechnical characterization approach that includes historic distress evaluation, geomorphic study, geophysical survey, integrated reach selection, and geotechnical analyses was implemented in the early design stages of these projects. This comprehensive approach results in improved understanding of existing conditions, reduced subsequent design changes, culminating in many innovative design measures. Cost-effective measures such as zoned embankments, shallower cutoff wall applications for ‘stitched –blanket’ conditions, differentiation of younger and older Alluviums for cutoff wall depth determination, relief wells, and toe berms with locally available materials have reduced project costs by as much as 60-80 percent of initial feasibility level estimates.

Khaled's presentation will focus on aspects of initial levee construction in the Central Valley of California, current criteria and geotechnical analysis protocols, applying an integrated approach to evaluate levee distress conditions, and development of cost-effective solutions in recent levee projects.
Khaled Chowdhury, PE, GE is a Project Manager for URS Corporation in Sacramento, California. He received his BS degree in Civil Engineering from Bangladesh University of Engineering and Technology in 1997 and ME in Civil Engineering (Geotechnical) from Texas A&M University in 2000. Khaled is currently pursuing his Ph.D at the University of California, Berkeley. His research area is in seismic stability of embankment dams.

Khaled has 15 years of geotechnical engineering experience in Texas, New York, New Jersey, and California. Khaled started as a staff engineer in URS office in Wayne, New Jersey in 2000. In 2006, he joined Kleinfelder in their Sacramento office, as a Project Engineer. He has been with URS, Sacramento since 2007.

Khaled has experience in infrastructure projects such as dams and levees, highways and bridges, support excavation and dewatering, building structures, rock slopes, and landfill. In Northern California, he has been leading the geotechnical evaluation and design teams for DWR’s Urban and Non-Urban Levee Evaluation Projects (study areas include Natomas Basin, Feather River, Sutter Bypass, Wheatland, and Reclamation District Nos. 784 and 1001), USACE’s NEMDC-Reach H, SBPCC’s Feather River West Levee Project, and SAFCA’s North Area Streams Project. Other notable projects include USACE’s Levee Screening in the Central Valley, Interstate 80 widening in Roseville, American Canal and Levee in Rio-Grande River, Brooklyn Bridge Seismic Retrofit Project, New York’s Croton Water Treatment Plant, and New York Metro-North Railroad’s Rock Slope Protection Project. He has played a key role in developing DWR’s Guidance Document for Geotechnical Analysis of Levees, Rural Levee Repair Guidelines (RLRG http://www.water.ca.gov/floodmgmt/fmo/rlrc/), and USACE’s draft guidelines on seismic evaluation of levees.