Levee Seepage and Slope Stability Issues

Dr. Timothy D. Stark – University of Illinois at Urbana-Champaign
Dr. Navid H. Jafari – Louisiana State University
Mr. Glen Bellew – USACE Kansas City District
Mr. Chris J. Redell - USACE St. Louis District

Thursday, February 9, 2017
Scott Conference Center
6450 Pine Street
University of Nebraska
Omaha, Nebraska
Check-in begins: 7:45 a.m.
Course: 8:15 a.m. – 5:15 p.m.

Sponsored By:

34th GEO-Omaha 2017
Nebraska ASCE Geotechnical Section
&
Embankments, Dams, and Slopes Committee of ASCE Geo-Institute

Register online: **http://bit.do/2017neascegeoshortcourse**

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Time	Presentation Topic	Speaker
7:45–8:15	Registration/Continental Breakfast	
8:15–8:25	Greetings and Introductions…….	Steve Saye and Tim Stark
8:25–9:25	Unsaturated and Saturated Seepage Analyses…….	Tim Stark
9:25–9:45	Anisotropic and Layered Seepage Analyses…….	Tim Stark
9:45–10:00	Break/Networking/Discussion	
10:00–11:15	Measurement of Unsaturated and Saturated Seepage Parameters……	Navid Jafari
11:15–12:15	SLIDE and SLOPE/W Software Levee Seepage and Stability Example……	Navid Jafari
12:15–1:00	Lunch Break/Networking/Discussion	
1:00–2:00	Seepage Forces and Filter Design……...	Tim Stark
2:00–2:45	Levee Remedial Measures……	Glen Bellew, Kansas City District, USACE
2:45–3:00	Break/Networking/Discussion	

CASE HISTORIES

3:00–4:00	Wood River Levee Seepage Area and 3D Trench Stability……	Chris Redell, St. Louis District, USACE
4:00–4:45	Floodwall Seepage and Stability Analyses……	Glen Bellew, Kansas City District, USACE
4:45–5:15	Summary and Panel Discussion……	All Speakers Active Audience Participation Encouraged and Welcomed
5:15	Adjourn & Networking/Exhibits	

Why You Should Attend:

After completing this course, you should:

- Have a knowledge of current geotechnical engineering practices for seepage investigations and applicable analyses for various earth structures
- Selection of saturated and unsaturated seepage parameters
- Understand the importance of 3D v. 2D seepage analyses
- Become more proficient in reviewing and analyzing seepage problems and analyses

Course Instructors:

Timothy D. Stark, Ph.D., P.E. has been a Professor of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign since 1991. His research interests include the static and seismic stability of natural and manmade slopes, three-dimensional slope stability analyses, shear strengths for slope stability analyses, and earthquake-induced liquefaction and post-liquefaction strength of cohesionless soils. Dr. Stark has received a number of awards for his research, teaching, and service activities including the 2015 James M. Hoover Lecturer, Iowa State University; Thomas A. Middlebrooks Award from the American Society of Civil Engineers (ASCE), 2013 and 1998; Associated Editor of the Year by ASCE Journal of Geotechnical and Geoenvironmental Engineering, 2011; Best Scholarly Paper from Journal of Legal Affairs of ASCE, 2011; R.M. Quigley Award from the Canadian Geotechnical Society, 2003; R.S. Ladd ASTM Standards Development Award from the ASTM, 2013, 2011, and 2002; Walter L. Huber Research Prize from ASCE, 1999.

Navid H. Jafari, Ph.D. is an assistant professor at Louisiana State University, where his research is focused on coastal, geoenvironmental, and geotechnical engineering. His primary areas of research in coastal geotechnics include multi-scale analysis of storm surge and flood protection infrastructure; coastal restoration and ecological engineering of wetlands; soil behavior of sediments and organic soils; and analysis of natural, man-made, and submarine landslides. His specific areas of interest in geoenvironmental engineering include design of waste containment systems, sustainable management of industrial wastes, and the development, migration, and containment of elevated landfill temperature events. Dr. Jafari earned his M.S. (2011) and Ph.D. (2015) in geotechnical engineering from the University of Illinois at Urbana-Champaign.

Glen Bellew is Chief of the Geotechnical Design and Dam Safety Section in the Kansas City District - Corps of Engineers. Since joining the Corps in 2004, he has worked extensively on flood risk management projects around the country including dams, levees, and floodwalls. He has experience in design, construction, risk assessments, inspection, flood fighting, and rehabilitation of flood risk management projects. Mr. Bellew is also involved in several efforts to update USACE technical and policy guidance related to flood risk management projects. He is a double graduate of the University of Missouri – Columbia, receiving a Bachelor's degree in Civil Engineering in 2002 and a Master's Degree in Civil Engineering with a Geotechnical emphasis in 2004. Mr. Bellew is a licensed Professional Engineer in the state of Missouri.

Christopher J. Redell is a geotechnical design engineer for the Geotechnical and HRTW branch in the St. Louis District - Corps of Engineers. Mr. Redell started working for the Corps in 2010, his work has evaluated every spectrum of geotechnical engineering from exploration, to lab testing, to design and construction. Throughout his career he has been involved with over 45 projects that range from design, advanced modeling efforts, construction oversight, periodic inspections, risk assessments, and flood risk reduction measures. He is a graduate from the University of Missouri Science and technology where he holds a Bachelor's of science in Civil Engineering, a Master's of Science in Geological Engineering and a Master's of Science in Civil Engineering with a Geotechnical emphasis. Mr. Redell is a licensed Professional Engineer in the state of Missouri.