COMMITTEE CORNER

Several USSD Technical Committees organized and led workshops during the 2017 Annual Conference in Anaheim. These reports summarize the workshops.

Dry Dams and Levees

Rachael Bisnett, Committee Chair, Embankment Dams

The Dry Dams and Levees workshop was developed and presented by three USSD Committees — Embankment Dams, Levees, and Instrumentation and Monitoring. Embankments such as flood control dams, river levees with normal stage below the base of the levee, and dams in drought-affected areas are examples of dry dams and levees that require particular considerations for analysis, design, construction, and monitoring because they can experience multiple "first" fillings over a lifetime.

The workshop reviewed potential cracking mechanisms in these unsaturated embankments, some of which are unique to flood-control dams and levees in semi-arid environments. Relevant internal erosion potential failure modes were described with example event trees and suggestions on how to handle intermittent, transient hydraulic loading in the risk evaluation process. Soil physical characteristics and specialized laboratory testing methods for scour and erosion potential were presented in the context of internal erosion failure modes. Numerical and physical modelling tools for estimating the response of unsaturated embankments subjected to rapid filling and drawdown were introduced. Finally, defensive design measures to protect from adverse effects of transient hydraulic loading on potentially cracked sections were summarized followed by recommendations for inspections and monitoring of dry dam and levee structures.

Public Safety Guidelines (American Style)

William F. Foos, Committee Chair, Public Safety and Security for Dams

On April 6-7, 2017, the USSD Committee on Public Safety and Security and the Canadian Dam Association held a critically important workshop, sponsored by Worthington Products. Led by CDA's past president, Tony Bennett (current Director of Dam and Public Safety for Ontario Power Generation) and Lyle Rowat (Ontario Power Generation), the workshop provided tools and case studies to 27 attendees during practical hands-on exercises that were designed to be applied during public safety risk assessments at dams across the nation. This course is the only existing one known to focus on identifying public safety hazards around dams, measure these risks, and provide a framework to mitigate these risks.

One attendee stated of the workshop: "The dam safety training was a great orientation to many of the dangers that are associated with dams. The processes to evaluate risk were laid out clearly and assisted in understanding how to prioritize critical issues."

Another participant stated: "The overarching message that I took away from the public safety workshop was this: unless you put yourself into the eyes, mind, and body of an overzealous swimmer, boater, or fisherman, you will not truly recognize the many public safety vulnerabilities to your facility, organization, or location."

This training was the first of its kind held in the United States and is part of an initiative started by both ASDSO and USSD earlier this year to develop a National Public Safety Program for dams within the United States. The efforts of the two organizations have assisted the United States' National Dam Safety Review Board (NDSRB) in the establishment of a new task force focused on this issue.

Answering the Most Important Question of 2017

Kelly Schaeffer, Committee Chair, Environment and Sustainability

From the agricultural practices that led to the "Dustbowl" of the 1930s to the onset of the environmental movement in the 1970s and since, various facets of the U.S. and the global economy have struggled to incorporate "environmentally sustainable" practices in their operations. As attention turns to our nation's water infrastructure, the question of sustainability and how USSD would define a sustainable water project has risen.

Every issue that USSD members face today, from the media to policy makers to the general public, is tied directly to the question of the environmental sustainability of the projects we create or operate. There is no more important question to address and the very future of our work depends on how we approach the answer. The answer to this question differs if you are an engineer, an environmental professional, a member of the public, or member of the press.

This workshop focused on understanding how other water professional view environmental sustainability including USACE, BOR, the Low Impact Hydro Institute, The Nature Conservancy, and the San Francisco Public Utilities Commission. In the afternoon, we broke into small groups where each group developed and practiced communicating their collective definition of Environmental Sustainability in the context of a 140-character tweet, a 20-second news interview with CNN, and how we might answer the question if called upon by Congress or the Administration in 300 words or less. The goal of this workshop was to assist USSD in answering this most important question.