

Third Workshop on Case Histories in Dam Safety Risk-Informed Decision Making

In the US and overseas, an increasing number of organizations are applying risk assessment to inform dam safety decision making and management, and an accelerating interest is being shown by others. There is a great need for case histories that illustrate how actual applications have been conducted and how their results have been used in decision making. Such practical examples have the potential to make the concepts and theory of risk assessment more understandable to dam safety practitioners. They can also illustrate the diversity of problems that can benefit from risk assessment, alternative approaches to risk analysis, addressing uncertainties, limitations, and the way in which differences such as public and private dam ownership and regulated and non-regulated environments can influence its use.

Similar Case Histories Workshops were held in 2010 and 2014. Both were very well attended and resulted in lively discussions. A total of thirteen case histories were presented for a variety of problem types and ownership or regulatory contexts.

As with the previous Case Histories Workshops, we plan to request each presenter to follow the following outline:

1. Purpose, Context and Scope: including owner, regulator and stakeholder considerations and risk assessment scoping factors such as types of outcomes, range of loading/initiating event types, failure modes, types of consequences, desired level of confidence and how uncertainty was addressed.
2. Baseline Risk Assessment: including potential failure modes identification, form of risk model, estimation of load (hazard) probabilities, system response probabilities (fragilities) and consequences, and the risk estimates and their evaluation against guidelines.
3. Risk Reduction Assessment (if applicable): including selection of risk reduction alternatives, their representation in the risk model, and the risk estimates and their evaluation against guidelines.
4. Limitations, Decisions, Risk Communication and Lessons Learned and how other factors and uncertainty were addressed in decision making and risk management.

The Workshop co-organizers are David Bowles, RAC Engineers and Economists, LLC and Utah State University, Nate Snorteland, US Army Corps of Engineers, Douglas D. Boyer, FERC, and Brian Becker, Reclamation. The workshop is sponsored by the USSD Committee on Dam Safety, chaired by Brian Becker through its Risk Subcommittee chaired by David Bowles.

Agenda - USSD 2018 “Third Workshop on Case Histories in Dam Safety Risk-Informed Decision Making”

8:00	Session 1	Moderator: David Bowles, Chair, Risk Subcommittee, CODSS
8:05	Welcome	Brian Becker, Chair CODSS
8:10	Case History 1	Detailed PFMA for the Design of New Glades Reservoir. Jennifer Williams, AECOM
9:00	Case History 2	Tellico Dam Semi-Quantitative Risk Analysis Husein Hasan and Caleb Douglas, TVA
9:50	Break	
10:05	Case History 3	Preliminary Quantitative Risk Assessment and FERC Pilot Study for Alcona Dam David S. Bowles, RAC Engineers and Economists
10:55	Case History 4	Construction Risks at Stampede Dam Jennifer Huggins, Bureau of Reclamation
11:45	General Discussion	Moderator: David Bowles
12:15	Lunch	
13:15	Session 2	Moderator: Nate Snorteland
13:15	Case History 5	Coffer Dam Design Greg Hammer, US Army Corps of Engineers
14:05	Case History 6	Seqwater Dams Portfolio Risk Assessment Barton Maher, Seqwater
14:55	Break	
15:10	Case History 7	A Scaled and Efficient Semi-Quantitative Risk Analysis for a Portfolio of 22 High Hazard Dams Daniel Osmun, HDR
16:00	Case History 8	A Risk-informed State Dam Safety Regulatory Framework: Twenty Years Experience Siraj Perera, Department of Environment, State of Victoria (presented by David Bowles, RAC Engineers and Economists)
16:50	General Discussion	Moderator: Nate Snorteland
17:25	Wrap-up comments	David Bowles, Chair Risk Subcommittee, CODSS
17:30		