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Association of State Dam Safety Officials
239 S. Limestone St.
Lexington, KY 40508

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NORTH DAKOTA DAM SAFETY SEMINAR

DAM ENGINEERING FUNDAMENTALS

WHAT EVERY ENGINEER WORKING ON DAMS SHOULD KNOW

MAY 3-4, 2016 BISMARCK, NORTH DAKOTA

The Association of State Dam Safety Officials, (ASDSO), in conjunction with the North Dakota State Water Commission, invites you to participate in a two-day *Dam Safety Seminar* on May 3-4, 2016 at the North Dakota Heritage Center, 612 East Boulevard Ave, Bismarck, ND 58505.

This seminar provides instruction and guidance on sound design features for new dams and for rehabilitating existing dams to address common potential failure modes with an emphasis on embankment dams. The target audience includes engineers responsible for designing or reviewing the design for new dams and dam rehabilitation projects. A brief background and historical perspective of dam engineering in the United States will be provided along with discussions on past dam design assumptions and details that are no longer practiced and why. Case studies from past dam failures and incidents will be presented to support current best practices. Emphasis will be placed on current design standards and

practices for dams including relatively new construction methods such as the use of roller-compacted concrete (RCC), articulating concrete blocks (ACBs), soil-cement, synthetic liners, fuse gates, labyrinth control structures, inflatable dams, slip-lining conduits, etc.

The seminar will begin at 8:00 AM, and will end promptly at the listed agenda times. A working lunch and refreshment breaks are included in the \$50 registration fee. In addition to technical information presented by a well-known expert in the field of dam safety, the seminar also offers the opportunity to meet and network with others in the engineering community and with your state dam safety officials. As part of the registration fee, you will receive a copy of the seminar materials plus several helpful references.

INSTRUCTOR

Paul Schweiger, P.E.

Paul G. Schweiger, P.E. is a Vice President of Gannett Fleming and Manager of the Firm's Dams and Hydraulics Section in Camp Hill, PA. He has over 32 years of consulting engineering experience during which time he has worked on hundreds of dam projects providing the full range of dam engineering services. Mr. Schweiger is an approved FERC Potential Failure Modes Analysis facilitator and a regular ASDSO Dam Owner Workshop instructor. He has published more than 50 technical papers and manuals, given many presentations on a wide range of dam engineering topics, and is a frequent speaker at national dam safety conferences and specialty technical seminars. He also developed and co-teaches the popular ASDSO Inspection and Assessment of Dams course, is the lead instructor for the ASDSO Lessons Learned from Dam Failures seminar and a specialty seminar for Evaluating the Stability and Integrity of Auxiliary Spillways Using SITES. He has served on several dam safety committees and work groups including: the National Dam Safety Review Board, the NRCS Study Work Group to evaluate design tools for roller-compacted concrete stepped spillways and embankment armoring, the FEMA work group for establishing guidelines for the hydraulic safety of dams, and led the FEMA study to convey lessons learned from dam failures and incidents. He is currently serving as an expert hydrology and hydraulics engineer on an Independent External Peer Review panel for several United States Army Corps of Engineers DSAC I dam projects.

AGENDA

Day 1		Day 2	
8:00 - 8:15	Welcome and introduction to seminar	8:00-8:15	Recap Day 1 and Review Day 2 Agenda
8:15 - 9:15	A Look at the Past and A Look Forward	8:15-9:15	Common Embankment Dam Failure Modes (Part 1)
9:15 - 9:30	Break		
9:30 - 10:30	Dam Overtopping Failures	9:15-9:30	Break
10:30 - 10:45	Break	9:30-10:30	Common Embankment Dam Failure Modes (Part 2)
10:45 - 12:00	History of Design Flood Section		
12:00 - 1:00	Lunch (Video - Unleashed Terror: Dam Breaks)	10:30-10:45	Break
1:00 - 2:15	Approaches to Increase Conveyance Capacity	10:45-12:00	Rehabilitating Embankment Dams
2:15 - 2:30	Break	12:00-1:00	Lunch
2:30 - 3:30	Spillway Erosion and Breaching Failures	1:00-2:00	Outlet Works Failure Modes
3:30 - 3:45	Break	2:00-2:15	Break
3:45 - 5:00	Spillway Rehabilitation and Construction	2:15-3:15	Rehabilitating Outlet Works
		3:15-3:30	Break
5:00 - 6:30	Dinner on Own	3:30-4:30	Rehabilitating Outlet Works (Contd.)
6:30 - 9:00	Optional Evening Session (Q & A - Participants to bring Design Problems)	4:30-4:45	Break
		4:45-5:00	Seminar Wrap Up
		5:00	End of Seminar

2016 NORTH DAKOTA DAM SAFETY SEMINAR REGISTRATION FORM

Registration fee is \$50. Please fill out completely, include credit card information or check payable to "ASDSO", and mail to ASDSO, 239 S. Limestone St., Lexington, KY, 40508 or FAX (859) 550-2795. A confirmation letter will be emailed to you. Copy this form to register multiple individuals from your organization.

Contact Information

Name _____

Badge Name _____

Title _____

Company _____

Address _____

City/State/Zip _____

Phone/Fax _____

Email _____

Selection of Events

\$50 - ND Dam Safety Seminar

Form of Payment

Total Amount Enclosed \$ _____

Check

Credit Card (circle one) AMEX Discover Visa/MC

Card No. _____

Name as it appears on the card _____

Expiration Date: _____ CVV Code: _____

Option: You can register for this meeting on-line at www.damsafety.org, click the yellow "Join Today" button to create a new account for the ASDSO Portal and register. The on-line system accepts credit card payments and electronic checks. Space is limited so please register early. Thank you and have a safe trip to the seminar.