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FEMA

EMERGENCY MANAGEMENT INSTITUTE

CLASS SCHEDULE

COURSE CODE: E0274
NATIONAL DAM SAFETY PROGRAM TECHNICAL SEMINAR NO. 20
"OVERTOPPING PROTECTION FOR DAMS"
February 20–21, 2013

Course Manager
Jordan Manos

Place
Building E, Auditorium

Wednesday, February 20, 2013

8:00 a.m.	Welcome to NETC/EMI	Tony Russell, CEM® Superintendent Emergency Management Institute Emmitsburg, MD
8:10	Administrative Information	Jordan Manos, S.E., P.E., PMP Training Specialist Mitigation Branch Emergency Management Institute Emmitsburg, MD
8:25	Seminar Introduction and Overview	Jay Stateler, P.E. Civil Engineer Instrumentation and Inspections Group Technical Service Center Denver, CO

Flood Loadings

8:30	Hydrologic Loadings	Karen Weghorst, P.E. Manager Flood Hydrology and Consequences Group U.S. Bureau of Reclamation Denver, CO

Wednesday, February 20, 2013 (Continued)

9:00 a.m.	Proposed Federal Guidelines for Selecting and Accommodating Inflow Design Floods for Dams	Paul Schweiger, P.E. Vice President Gannett Fleming Camp Hill, PA
9:30	Probabilistic Flood Loadings	Karen Weghorst
10:00	Case History: Evaluation of Site-Specific Hydrologic Study	Jerry Gomez, P.E. President Gomez and Sullivan Engineers, P.C. Utica, NY
10:30	Break	

General Design Considerations to Accommodate Floods

11:00	Spillway Design Issues	Tom Hepler, P.E. Civil Engineer/Technical Specialist Waterways and Concrete Dams Group U.S. Bureau of Reclamation Denver, CO
11:30	Flood Overtopping Failure of Dams	Tony Wahl, M.S., P.E. Hydraulic Engineer Hydraulic Investigations and Laboratory Services Group U.S. Bureau of Reclamation Denver, CO
12:00	Lunch	

Modeling

1:00 p.m.	WinDAM B Earthen Embankment Overtopping Analysis Software	Karl Visser, P.E. Hydraulic Engineer Natural Resources Conservation Service U.S. Department of Agriculture Fort Worth, TX

Wednesday, February 20, 2013 (Continued)

1:30 p.m.	Modeling in a Hydraulic Lab (including discussion of scaling, prototype testing, and steady-state and wave conditions)	Dr. Chris Thornton, P.E. Associate Professor Director, Engineering Research Center and Hydraulics Laboratory Colorado State University Fort Collins, CO

Overview of New FEMA Manual: Overtopping Protection for Dams

2:00	Overview of New FEMA Manual: Overtopping Protection for Dams	Tom Hepler

Overtopping Protection for Embankment Dams

2:15	Vegetative Cover: Overtopping of Grass Embankments	Darrel Temple, P.E., D.WRE Research Hydraulic Engineer (Retired) Agriculture Research Service U.S. Department of Agriculture Glencoe, OK
2:45	Break	
3:15	Vegetative Cover and Turf Reinforcement Mats	Dr. Chris Thornton Dr. Jeff Beasley Associate Professor School of Plant, Environmental, and Soil Sciences Louisiana State University Agricultural Center Baton Rouge, LA
4:15	Overtopping Protection Alternatives: Riprap, Flow-Through Rockfill, and Reinforced Rockfill	Tony Wahl
4:45	Concrete Blocks: ABCs of ACBs (Articulated Concrete Blocks)	Paul Schweiger Dr. Chris Thornton
5:30	Adjourn	

Thursday, February 21, 2013

Overtopping Protection for Embankment Dams (Continued)

8:00 a.m.	New Jersey's Articulated Concrete Block Guidelines and Performance of ACBs During Flood Events	Darin Shaffer, P.E. Supervising Engineer Bureau of Dam Safety and Flood Control New Jersey Department of Environmental Protection Trenton, NJ
8:30	Concrete Blocks: Performance of ACBs for Overtopping Protection	Paul Schweiger
9:00	Conventional Concrete for Dam Overtopping Protection	Tom Hepler
9:30	Roller-Compacted Concrete (RCC): Lessons Learned from Design and Construction of Six RCC Embankment Overtopping Spillways and Two Concrete Chute Embankment Overtopping Spillways in Georgia	Gregg Hudock, P.E. Senior Consultant and Associate Golder Associates Inc. Atlanta, GA
10:00	Break	
10:30	RCC: Gwinnett County's NRCS Watershed Dam Rehabilitation Program - Planning Overtopping Protection	Sam Fleming, P.E. Department Manager Southeast Water Resources Department Dewberry Atlanta, GA Gregg Hudock
11:00	RCC: Gwinnett County - Performance of RCC Overtopping Structures During the September 2009 Flood Event	Sam Fleming Gregg Hudock
11:15	RCC vs. Articulated Concrete Blocks for Overtopping Protection	Paul Schweiger
11:45	Gabions, Geomembranes, Geocells, and Fabric-Formed Concrete for Dam Overtopping Protection	Tom Hepler

Thursday, February 21, 2013 (Continued)

12:00	Workshop Conclusions: Overtopping Protection for Embankment Dams	Tom Hepler
12:15 p.m.	Lunch	

Overtopping Protection for Concrete Dams

1:15	Overview: Overtopping Protection for Concrete Dams	Tom Hepler
1:30	Overtopping Modifications to Tygart Dam	Mark Zaitsoff, P.E. Supervisory Hydraulic Engineer Pittsburgh District, U.S. Army Corps of Engineers Pittsburgh, PA
2:00	Foundation and Abutment Reinforcing for Concrete Dams	Tom Hepler
2:15	Computational Fluid Dynamics (CFD) in Spillway Modeling	Dr. Dan Gessler, P.E., D.WRE Vice President Alden Research Laboratory, Inc. Fort Collins, CO

Deciding Between Overtopping Protection Options

2:45	Cost Estimating for Overtopping Protection	Jay Stateler
3:00	Break	
3:30	Potential Failure Modes and Risk Analysis for Overtopping Protection	Tony Wahl

Open or Panel Discussion

4:00	Including representation from: State Dam Safety Officials, Consulting Engineers, Universities, U.S. Bureau of Reclamation (USBR), Federal Energy Regulatory Commission (FERC), U.S. Army Corps of Engineers (USACE), and National Resources Conservation Service (NRCS)
5:30	Adjourn