1991 ASDSO Annual Conference

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Monday, September 30

10:30 am - 12 noon—Concurrent Technical Sessions

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Case Studies in Dam Rehabilitation

Kirby Experience: A Case Study
Bob Fleenor, P.E., Chief/Resource Protection Bureau
Idaho Department of Water Resources, Boise, ID

Marmot Dam Rehabilitation Project
Mike Pavone, P.E., Consulting Engineer; and
Steve Benson, P.E., Principal Engineer, EBASCO Services Inc.,
Bellevue, WA

Rehabilitation of Small Earth Dams
Richard P. Kummerle, P.E., P.G., Principal; and
Donald A. Benvie, P.E., Tectonic Engineering Consultants,
P.C., Highland Mills, NY

1:30 pm - 3:00 pm

Public Awareness Issues

California Dam Safety Community Preparedness Program
Jerry Kopp, Emergency Services Coordinator
Governor's Office of Emergency Services, Sacramento, CA

Realistic Methods of Testing Emergency Action Plans
for Small Dams
Marshall D. Fox, P.E., Chief, Safety Evaluation of Existing
Dams, US Fish and Wildlife Service, Denver, CO

Public Awareness Through Dam Failure Simulations
J. David Cattanach, Dam Safety Engineer,
BC Hydro, Vancouver, British Columbia

Geotechnical Issues

Seepage Cutoff Wall Design and Construction in Mud
Mountain Dam
Kenneth D. Graybeal, P.E., Principal Consultant,
Klohn Leonoff Consulting Engineers, Kirkland, WA

Load Transfer Mechanisms in High Capacity Prestressed
Rock Anchors for Dams
Dr. Donald A. Bruce, Technical Director;
M.D. Randolph, and J.D. Sloan, Nicholson Construction of
America, Bridgeville, PA; and
W.R. Fiedler, US Bureau of Reclamation, Denver, CO

Grouting Concrete Dams
W. James Marold, P.E., Senior Civil Engineer;
Casey M. Konarski, P.E., Civil Engineer; and
Michael P. Bruen, P.G., Senior Geologist
Harza Engineering Co., Chicago, IL
Miscellaneous Issues

Underwater Investigations at Dams and Waterways: A General Perspective
Ronald G. Sabri, Project Engineer; and Nicholas Pansic, Head, Special Projects Section, Harza Engineering Co., Chicago, IL

Effectiveness of Drains in Reducing Uplift in Cracks in Concrete Dams
Bernard Amadei, Associate Professor; Tissa Illangesekare, Professor; and C. Chinnaswamy, Department of Civil Engineering, University of Colorado at Boulder, Boulder, CO

Public Safety and Recreation at Dams
Andrew R. Blystra, P.E., President
A.R. Blystra & Associates, Valparaiso, IN

Tuesday, October 1

10:15 am - 12:15 pm—General Session

a) Geosynthetics in Dams:
Dr. J. P. Giroud, GeoSyntec Consultants Inc., Boynton Beach, Florida Only

b) National Center on the Performance of Dams
Martin W. McCann, Jr., Consulting Professor, Department of Civil Engineering, Stanford University, Stanford, California

1:30 pm - 3:00 pm—Concurrent Technical Sessions

Roller Compacted Concrete

Roller-Compacted Concrete for Dam Rehabilitation
William Bingham, P.E., Vice President
Gannett Fleming, Inc., Harrisburg, PA

Gilbraltar Dam: Roller Compacted Buttress Construction
Richard Sanchez, P.E., Senior Engineer, Division of Safety of Dams, California Department of Water Resources, Sacramento, CA

Roller Compacted Concrete Behavior and Seepage Control Characteristics
Hesham M. Ezzat, (M.S. Student) Researcher, Research Institute for Water Resources, Cairo, Egypt; and Dr. Marvin E. Criswell, Professor of Civil Engineering, Colorado State University, Fort Collins, CO
Case Studies in Dam Rehabilitation

Recent Dam Rehabilitation Projects in New South Wales Australia
Norman J. Himsley, B.E., Executive Engineer, Dam Safety Committee, New South Wales, Australia 193

Dam Safety Evaluation and Seepage Problems for a Concrete-Face Rockfill Dam
Keith A. Ferguson P.E., Project Manager; Dr. Y.K. Choi P.E., Senior Geotechnical Engineer; and D.D. Boyer, Project Engineering Specialist, GEI Consultants Inc., Englewood, CO 199

Overtopping Protection of Three Blue Ridge Parkway Dams
George R. Powledge, P.E., Western Regional Representative; R. Lee Wooten, P.E., Project Manager; and Stephen L. Whiteside, P.E., Vice President and Branch Manager, GEI Consultants Inc., Englewood, CO 205

Public Awareness Issues

Near Dam Failure at Lake Manitou, Rochester, Indiana
Bruce C. Murray, Chief/Geotechnical Branch US Army Corps of Engineers, Louisville, KY 213

Emergency Action Plans: The Comprehensive Exercise
Jerrold W. Gotzmer P.E., Senior Hydraulic Engineer, Federal Energy Regulatory Commission, Washington, DC 216

Keys to Public Acceptance of the Breaching of Clear Creek Dam
James A. Mumford, P.E., Chief, Safety of Dams Branch, US Bureau of Reclamation, Boise, ID 225

3:30 pm - 5:00 pm

Mining Issues

Soils Investigation and Stability Analyses Embankment Failure—Coal Refuse Impoundment
David E. Daniels, P.E., Associate Partner; and John M. Healy, P.E. S.E., Principal Hanson, Shannon & Wilson Engineers, Inc., Springfield, IL 233

Coal Mining Beneath Dams in New South Wales Australia
Peter Reid, Engineering Geologist, Dam Safety Committee, New South Wales, Australia 240

Seismic Rehabilitation of Existing and Abandoned Tailings Dams
Thomas G. Harper, P.E., Vice President Klohn Leonoff, Inc., Kirkland, WA; Harvey N. McLeod, Manager, Mining Services Division; and 246
Hydrology & Hydraulics

Development of a Real-Time Flood Forecasting and Spillway Gate Operations Model
John E. Rutledge, P.E., Associate, Freese and Nichols Inc., Fort Worth, TX

Probabilistic Hydrologic Risk Assessment: Input for the Decision Maker
Martin W. McCann, Jr., Consulting Professor, Department of Civil Engineering, Stanford University, Stanford, CA

Owner's Perspective in Evaluating Dams Under the PMF
Robert E. Kohne, Manager, Hydro Engineering & Construction; Catalino B. Cecilio, Senior Civil Engineer; and Nicholas J. Markevich, Civil Engineer, Pacific Gas and Electric Company, San Francisco, California

Site-Specific Probable Maximum Precipitation Estimate for North Fork Kings River Above Wishon Dam
John F. Miller, Consulting Meteorologist, Rockville, MD; and Francis K. Schwarz, Consulting Meteorologist, Rockville, MD

Miscellaneous Issues

Hydraulic Design of Stepped Concrete Overtopping Protection for Embankment Dams
Kathleen H. Frizell, Hydraulic Engineer, US Bureau of Reclamation, Denver, CO

Low-Cost, Automated Detection of Precursors to Dam Failure: Coolidge Dam, Arizona
Gary R. Holzhausen, Ph.D., President, Applied Geomechanics, Inc., Santa Cruz, California

Managing Underwater Inspections
Thomas J. Collins, P.E., President, Collins Engineers Inc., Chicago, IL

Wednesday, October 2

8:30-10:00 am—Concurrent Technical Sessions

Seismic Design and Case Studies

A Methodology for Determining Concrete Gravity Dams Stability During and After an Earthquake Event
Hoss Foadian, P.E., Project Engineer; Peter R. Barrett, P.E., Senior Engineer; and Dr. Y.R. Rashid, President,
ANATECH Research Corp., La Jolla, CA; and
Douglas I. Morris, Project Manager,
Electric Power Research Institute, Palo Alto, CA

Implications on the Safety of Earth Dams as a Result of the Loma Prieta Earthquake
John Vrymoed, P.E., Senior Engineer, Division of Safety of Dams, Sacramento, CA 295

Behavior of Dams During the Philippines Earthquake
Yin Au-Yeung, P.E., Vice President; and
James R. Swaisgood, P.E., Principal Geotechnical Engineer,
ATC Engineering Consultants Inc (ECI), Englewood, CO 296

Case Studies in Dam Rehabilitation

Design of Overtopping Protection for A.R. Bowman Dam
Perry J. Hensley, P.E., Principal Designer, Geotechnical Engineering and Embankment Dams Branch; and
Charles C. Hennig, P.E., Civil Engineer, Dam Safety Office,
US Bureau of Reclamation, Denver, CO 317

Cedar Lake Dam Failure & Repair
Cecil R. Bearden, P.E., Senior Engineer
Oklahoma Water Resources Board, Oklahoma City, OK; and
Pat Carr, P.E., Operations Manager, The Judy Company,
Kansas City, KS 322

Safety Modifications for Bear Creek Dam
Niels M. Nielsen, Project Engineer, BC Hydro, Vancouver, British Columbia 328

Miscellaneous Issues

Focusing Attention on Dam Safety in the Hydropower Industry
Marla Barnes, Editor, Hydro-Review Magazine, Kansas City, MO 341

Effect of Geology on Uplift and Dam Stability
Bernard Amadei, Associate Professor; Tissa Illangasekare,
Full Professor, C. Dialer, and C. Chinnaswamy, Department of
Civil Engineering, University of Colorado, Boulder, CO 347

Liability and Dam Safety: The State of the Law 1991
Hugh Anderson, Attorney at Law, Wickwire Gavin P.C., Madison, WI 355

10:15 am - 12 noon—General Session

a) The Salt River Project
Larry K. Lambert, Executive
Engineer, Safety of Dams, The Salt River Project, Phoenix, Arizona

b) Panel Discussion on Seismic Design Issues
Vernon Persson, Chief, Division of Safety of Dams,
Department of Water Resources, Sacramento, California

Present. Only