### 2020 Conference and Exhibition

**Sunday, April 19**
- **3:00 pm - 6:00 p.m.** Registration Desk Open  
  *Hyatt Lobby*

**Monday, April 20**
- **7:00 am - 7:00 pm** Registration Desk Open  
  *Centennial Foyer*
- **8:30 am - 10:30 am** Conference Opening Session: Legacy Lecture Series  
  *Centennial F-H*
  - Legacy of LeRoy Francis Harza — Dean of American Hydroelectric Engineers, James Lindell, Stantec
  - Thoughts from the Johnny Appleseed of Dam Engineering, Kenneth Hansen, Consultant
- **10:30 am - 11:00 am** Break  
  *Centennial Foyer*
- **11:00 am - 12:00 noon** Conference Opening Session: Legacy Lecture Series, continued  
  *Centennial F-H*
  - Audience Q&A, facilitated by Michael Rogers, Stantec
  - Final Remarks, James Lindell and Kenneth Hansen
  - Closing Statements, Larry Nuss, Nuss Engineering, LLC
- **1:30 pm - 3:30 pm** Committee Meetings Session 1  
  *Various*
- **3:30 pm - 4:00 pm** Break  
  *Centennial Foyer*
- **4:00 pm - 6:00 pm** Committee Meetings Session 2  
  *Various*
- **6:00 pm - 7:30 pm** Welcome Reception  
  *Centennial Ballroom*
- **7:30 pm - 9:00 pm** Tribute to Kim DeRubertis Reception  
  *Mineral Foyer*

**Tuesday, April 21**
- **7:00 am - 6:00 pm** Registration Desk Open  
  *Centennial Foyer*
- **7:15 am - 8:15 am** USSD Town Hall: Ask the Board  
  *Centennial F*
- **7:15 am - 8:15 am** Continental Breakfast in Exhibit Hall  
  *Centennial Ballroom*
- **8:30 am - 10:15 am** Plenary Session 1  
  *Capitol Ballroom*
- **10:15 am - 10:45 am** Break in Exhibit Hall  
  *Centennial Ballroom*
- **10:45 am - 12:15 pm** Concurrent Technical Sessions Track 1  
  *Various*
  - 1A Concrete Dams I
  - 1B Embankment Dams I
  - 1C Hydraulics & Hydrology I
  - 1D Tailings Dams I
  - 1E Scholarship Finalist Presentations
  - Interactive Presentations I: Earthquakes and Construction & Rehabilitation
- **12:15 pm - 1:30 pm** Lunch in Exhibit Hall  
  *Centennial Foyer*
- **1:30 pm - 3:30 pm** Concurrent Technical Sessions Track 2  
  *Various*
  - 2A Concrete Dams II
  - 2B Embankment Dams II
  - 2C Sustain or Decommission: The Future for a Dam
  - 2D Monitoring
  - 2E Dam Safety I
  - Interactive Presentations II: Hydraulics & Hydrology
- **3:30 pm - 4:00 pm** Break in Exhibit Hall  
  *Centennial Ballroom*
- **4:00 pm - 6:00 pm** Committee Meetings Session 3  
  *Various*
- **6:00 pm - 7:30 pm** Exhibitor Reception  
  *Centennial Ballroom*
- **7:30 pm - 9:30 pm** Young Professional/First-Time Attendee Networking Social  
  *Live @ Jack’s, Denver Pavilions, 500 16th St.*
### Wednesday, April 22

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 am</td>
<td>5K FUNds Run/Walk (buses depart Hyatt at 6 am)</td>
<td>City Park</td>
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<tr>
<td>7:00 am - 5:00 pm</td>
<td>Registration Desk Open</td>
<td>Centennial Foyer</td>
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<tr>
<td>7:15 am - 8:15 am</td>
<td>Continental Breakfast in Exhibit Hall</td>
<td>Centennial Ballroom</td>
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<tr>
<td>8:30 am - 10:15 am</td>
<td>Plenary Session 2</td>
<td>Capitol Ballroom</td>
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<tr>
<td>10:15 am - 10:45 am</td>
<td>Break in Exhibit Hall</td>
<td>Centennial Ballroom</td>
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<tr>
<td>10:45 am - 12:15 pm</td>
<td>Concurrent Technical Sessions Track 3</td>
<td>Centennial F</td>
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<tr>
<td></td>
<td>3A Concrete Dams III</td>
<td>Centennial G</td>
</tr>
<tr>
<td></td>
<td>3B Construction &amp; Rehabilitation I</td>
<td>Centennial H</td>
</tr>
<tr>
<td></td>
<td>3C Emergency Preparedness</td>
<td>Mineral DE</td>
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<tr>
<td></td>
<td>3D Tailings Dams II</td>
<td>Mineral FG</td>
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<tr>
<td></td>
<td>3E Dam Safety II</td>
<td>Mineral ABC</td>
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<tr>
<td>12:15 pm - 1:30 pm</td>
<td>Lunch in Exhibit Hall</td>
<td>Centennial Ballroom</td>
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<td></td>
<td>YP Mentoring Luncheon (pre-registration required)</td>
<td>Capitol Ballroom</td>
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<tr>
<td>1:30 pm - 3:30 pm</td>
<td>Concurrent Technical Sessions Track 4</td>
<td>Centennial F</td>
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<tr>
<td></td>
<td>4A Earthquakes (Embankments)</td>
<td>Centennial G</td>
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<tr>
<td></td>
<td>4B Construction &amp; Rehabilitation II</td>
<td>Centennial H</td>
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<tr>
<td></td>
<td>4C Hydraulics &amp; Hydrology II</td>
<td>Mineral DE</td>
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<tr>
<td></td>
<td>4D Levees</td>
<td>Mineral FG</td>
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<tr>
<td></td>
<td>4E Dam Safety III</td>
<td>Mineral ABC</td>
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<tr>
<td>3:30 pm - 4:00 pm</td>
<td>Break in Exhibit Hall</td>
<td>Centennial Ballroom</td>
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<tr>
<td>4:00 pm - 6:00 pm</td>
<td>Concurrent Technical Sessions Track 5</td>
<td>Centennial F</td>
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<tr>
<td></td>
<td>5A Earthquakes (Concrete)</td>
<td>Centennial G</td>
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<tr>
<td></td>
<td>5B Construction &amp; Rehabilitation III</td>
<td>Centennial H</td>
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<tr>
<td></td>
<td>5C Embankment Dams III</td>
<td>Mineral DE</td>
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<td></td>
<td>5D Public Safety</td>
<td>Mineral FG</td>
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<td></td>
<td>5E Foundations</td>
<td>Mineral ABC</td>
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<tr>
<td>5:30 pm - 6:30 pm</td>
<td>USACE TownHall Meeting</td>
<td>Mineral ABC</td>
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<tr>
<td>6:30 pm - 9:30 pm</td>
<td>Wrap Party (ticketed)</td>
<td>History Colorado Center</td>
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### Thursday, April 23

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00 am - 2:00 pm</td>
<td>Workshop Registration Desk Open</td>
<td>Mineral Foyer</td>
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<tr>
<td></td>
<td>Concurrent Workshops</td>
<td></td>
</tr>
<tr>
<td>8:00 am - 5:30 pm</td>
<td>1. Communication during the “Golden Hour” — Risk and Crisis Communication Strategies for Dam Safety</td>
<td>Mineral A</td>
</tr>
<tr>
<td>8:00 am - 5:00 pm</td>
<td>2. Probabilistic Flood Hazard Analysis</td>
<td>Mineral BC</td>
</tr>
<tr>
<td>8:30 am - 4:30 pm</td>
<td>3. Earthquake Shaking and Ground Failure Hazards for Dams, including Automated Real-time Inspection Prioritization</td>
<td>Mineral DE</td>
</tr>
<tr>
<td>8:15 am - 4:30 pm</td>
<td>4. Tailings Dam Safety Management and Engineer of Record</td>
<td>Granite</td>
</tr>
<tr>
<td>8:00 am - 12 noon</td>
<td>5. Evaluation Principles for the Monitoring of Dams and Their Foundations</td>
<td>Mineral FG</td>
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<tr>
<td>1:00 pm - 5:00 pm</td>
<td>6. Power Skills</td>
<td>Mineral FG</td>
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<tr>
<td>11:30 - 1:00 pm</td>
<td>Lunch (times vary for each workshop)</td>
<td>Capitol Ballroom 1-4</td>
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### Friday, April 24

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 am - 12 noon</td>
<td>Field Tours</td>
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<td></td>
<td>Note: morning and afternoon field tours are identical</td>
</tr>
<tr>
<td>8:00 am - 12 noon</td>
<td>Bureau of Reclamation Laboratories Field Tour (extra charge)</td>
</tr>
<tr>
<td>1:00 pm - 5:00 pm</td>
<td>Bureau of Reclamation Laboratories Field Tour (extra charge)</td>
</tr>
</tbody>
</table>
## 1A: Concrete Dams
**Room: Centennial F**

**Moderators:** Aled Hughes, Stantec; and Guy Lund, Gannett Fleming, Inc.

- Determination of a Concrete Dam’s Dynamic Properties from Ambient Responses at Gross Reservoir Expansion Project
  - Ziyad “Zee” Duran, Harvey Mudd College
  - Michael Rogers, Stantec
- Designing the World’s Tallest Roller-Compacted Concrete Dam Raise for the Gross Reservoir Expansion Project
  - Jose Felipe Garcia, Stantec
  - Michael F. Rogers, Stantec
  - Jeff Martin, Denver Water
- Interactive Presentations
  - Gooran Vujasinovic, CTS

## 1B: Embankment Dams
**Room: Centennial G**

**Moderators:** Robert Bowers, Ramboll; and Justin Stoeber, AECOM

- C-43 Reservoir-Geotechnical Engineering Design Considerations
  - Kevin Aubry, Terracon Consultants, Inc.
  - Joseph Albers, South Florida Water Management District
  - Jamie Velez, Terracon Consultants, Inc.
- Application of Numerical Analyses in Design of Earth and Rockfill Embankments
  - Masood Kafash, AECOM
  - Pooya Allahverdizadeh, Sheykhhlo, AECOM
  - Richard Davidson, AECOM
  - John France, AECOM
  - Jennifer Williams, AECOM
- Final Design of Eagle Canyon Dam and Debris Basin
  - Samalingam Balachandran, GENTERRA Consultants, Inc.
  - Joseph Kulikowski, GENTERRA Consultants, Inc.
  - Shuyu Liu, GENTERRA Consultants, Inc.
  - Robert Cullen, Riverside County Flood Control & Water Conservation District
- Interactive Presentations
  - Casey Dick, Denver Water

## 1C: Hydraulics & Hydrology
**Room: Centennial H**

**Moderators:** Brian Crookson, Colorado State University; and Carmen Bernedo, Stantec

- Translating a Gravity Dam into a Thick Arch Dam for the Gross Reservoir Expansion Project
  - Ronald Aled Hughes, Stantec
  - Glenn S. Tarbox, Stantec
  - Michael F. Rogers, Stantec
  - Mohammadreza Mostafa, Stantec
- Soil-Cement for Use in an Embankment Dam Seismic Stability Shear Key
  - Robert Rinehart, USACE
  - Gero Arany, USBR
  - Richard Bearce, USBR
  - Evan Lindenbach, USBR
- A Novel Stillage Basin for a Steep, Stepped Spillway: the Gross Reservoir Expansion Project
  - Christopher Thornton, Colorado State University
  - Robert Ettema, Colorado State University
  - Dan Olmsead, Eugene Water and Electric Board
  - Chris Goodell, Kleinschmidt Group
- Integrating Hydraulic Design Methods for the Analyses of Large Dams
  - Nicholas Koutsunis, USACE
  - Brian Hall, USACE
  - Dana Moses, USACE
- Final Design of Eagle Canyon Dam and Debris Basin
  - Samalingam Balachandran, GENTERRA Consultants, Inc.
  - Joseph Kulikowski, GENTERRA Consultants, Inc.
  - Shuyu Liu, GENTERRA Consultants, Inc.
  - Robert Cullen, Riverside County Flood Control & Water Conservation District
- Interactive Presentations
  - Dana Moses, USACE
  - John France, AECOM

## 1D: Tailings Dams
**Room: Mineral DE**

**Moderators:** Carmen Bernedo, Stantec; and Jason Harvey, Barr Engineering Co.

- System Safety Approach for Tailings Dams Management
  - Sebnem Duzgun, Colorado School of Mines
- Stability and Safety Reviews for Tailings Dams – A Consultant’s Approach
  - Robert Snow, D’Appolonia
- Closure of a Tailings Dam in the USA - A Review of State Regulations
  - Phillip Crouse, Stantec
- Interactive Presentations
  - Mark Abshire, Engineering Analytics, Inc.
  - Robert Snow, D’Appolonia

## 1E: Scholarship Presentations
**Room: Mineral FG**

**Moderator:** Tina McMartin, Freese and Nichols, Inc.

- Interactive Presentations I
  - Mineral ABC

## Interactive Presentations

### Construction
- **Release Relief - Fixing 100 Year Old Dam Valves**
  - Brian Hamrick, Wood
- **Material Ageing – Key Criteria for Dam Waterproofing Systems**
  - Stefan Lemke, Renesco Inc
- **Suggestions for Selecting Methodology and Equipment for Delivery And Placing of Concrete on Concrete Dams**
  - Goran Vujasinovic, CTS International
- **Aging Concrete Dams - Causes of Deterioration and Methods of Rehabilitation**
  - William Black, Mead & Hunt
- **Guajataca Spillway Failure**
  - Chad Gillan, USACE
- **Lessons Learned from High Mountain Dam Construction Projects**
- **Rockfill Dam Construction Challenges at the Neelum Jhelum Hydroelectric Project**
  - Joseph Kovachic, Stantec
  - Malik Salman Ahsan, National Engineering Services Pakistan (Pvt) Limited
  - Haroon Rasheed, National Engineering Services Pakistan (Pvt) Limited
- **Condition Assessments in Managing a Diverse Portfolio of Aging Dams**
  - Brian McCormick, Colorado Springs Utilities
- **Earthquakes**
  - Dynamic Analyses of Liquefaction at Palinus Road During the Canterbury Earthquake Sequence
    - Patrick C. Bassal, University of California, Davis
    - Ross W. Boulanger, University of California, Davis
    - Brady R. Cox, University of Texas
    - Kathleen N. Yost, Virginia Polytechnic Institute and State University
- **Validating Nonlinear Seismic Analysis of Dam-Foundation-Reservoir System with Foundation Cyclic Symmetry**
  - Ali Rasekh, Klohn Crippen Berger Ltd.
Tuesday, April 21 — 1:30 pm -3:30 pm

**CONCURRENT SESSIONS — TRACK 2**

### 2A: Concrete Dams II
**Room: Centennial F**

Moderators: Mohammad Hariri Ardebili, University of Colorado; and Stewart Vaghti, Gannett Fleming

- Historical Construction Documentation Used to Evaluate an Internal Erosion PFM at Watauga Dam
  - Benjamin Webster, Stantec
  - Alan Rauch, Stantec
  - Jim Bryant, TVA
  - Caleb Douglas, TVA

- Cracked Embankment Erosion Testing
  - Peter Irey, USBR
  - Ted Howard, USBR

- Model of Internal Erosion in Earthen Embankment Dams with Non-Homogeneous Soil Parameters
  - Ali Presten, Geosyntec Consultants
  - Jai Pantahi, Geosyntec Consultants
  - Lucas DeMelis, Geosyntec Consultants
  - Glenn Rix, Geosyntec Consultants

- Assessment of Internal Erosion of Embankment Dams – An Owner’s Perspective
  - Li Yan, BC Hydro
  - Maxiu Li, BC Hydro
  - Charsis Anderlini, BC Hydro

- Internal Erosion: Dam Safety, State-of-Practice, and Advancing the State-of-Art
  - Jonathan Fanni, University of British Columbia
  - Maxiu Li, BC Hydro

- Mill Pond Dam Removal and Habitat Restoration - The Unbreakable Stream
  - Lloyd Dixon, Seattle City Light

### 2B: Embankment Dams II
**Room: Centennial G**

Moderators: James McHenry, FERC; and Deb Miller, Miller Geotechnical Consultants, Inc.

- Emergency Repairs to a 150+ Year-Old Dam in a Sensitive Environment
  - Grady Hillhouse, Frease and Nichols, Inc.
  - Doug Byrum, Texas State University

- Predicted Sediment Transport for Operations at Nolin Dam
  - Filipo Bressan, WEST Consultants
  - Martin Teal, WEST Consultants
  - Curtis Jawdy, TVA

- A New Sediment Modeling, Monitoring and Forecasting Framework for Dam Removal Based on Lessons Learned from Elwha River Restoration Experience
  - Jennifer Bountry, USBR
  - Timothy Randle, USBR
  - Lincoln Folsom, USBR
  - Al Preston, Geosyntec Consultants

- Mill Pond Dam Removal and Habitat Restoration - The Unbreakable Stream
  - Lloyd Dixon, Seattle City Light

### 2C: Sustain or Decommission
**Room: Centennial H**

Moderators: Jennifer Bountry, USBR; and Kevin Schneider, Barnard Construction Company

- Coming Full Circle: Anchoring Down and Lifting Off at Lock #27
  - Brian Barkauskas, Nicholson Construction
  - Tony Martinez, Nicholson Construction

- Fully Grouted and Vibrating Wire Piezometer Installations in Artesian and Karst Conditions at Mosul Dam
  - Georgette Hlepas, USBACE
  - Victorino Panigagua, USAACE
  - Masimo Malavolta, Trevi

- Innovations in Dam Instrumentation for Monitoring of Additional Water storage in the U.S.
  - Kayla Ramney, HDR
  - Blaine Dwyer, HDR

- A New Sediment Modeling, Monitoring and Forecasting Framework for Dam Removal Based on Lessons Learned from Elwha River Restoration Experience
  - Jennifer Bountry, USBR
  - Timothy Randle, USBR
  - Lincoln Folsom, USBR
  - Al Preston, Geosyntec Consultants

- Mill Pond Dam Removal and Habitat Restoration - The Unbreakable Stream
  - Lloyd Dixon, Seattle City Light

### 2D: Monitoring
**Room: Mineral DE**

Moderators: Philippe Bourdeau, Purdue University; and Amanda Sutter, USACE

- Are Storms Changing and What Does This Mean for PMP?
  - Bill Kappel, Applied Weather Associates
  - Doug Hillstrud, Applied Weather Associates
  - Geoff Muhlestein, Applied Weather Associates
  - Jake Rodel, Applied Weather Associates
  - Kristi Steinshilber, Applied Weather Associates

- Evaluating Dam Safety Incidents in a Risk Assessment Framework
  - Edwin Friend, USACE
  - Kevin Mininger, RJH Consultants

- A Risk Priority Model for Dam Potential Failure Mode Ranking and Prioritization
  - Ali Reza Firoozfar, HDR
  - Hamid Reza Firoozfar, University of Tehran
  - Keith Moen, HDR

- FEMA Dam Safety Technical Assistance Program
  - Molly Finster, Argonne National Laboratory
  - Preston Wilson, FEMA
  - Jose Lara, California OES
  - Lesley Edgemon, Argonne National Laboratory
  - Kyle Pfeiffer, Argonne National Laboratory

- Development of a Hydrologic Database to Inform Future Spillway Designs and Risk Analyses
  - Kevin Ruswick, Schnabel
  - Elizabeth Isenstein, Schnabel

- Calibration through Transposition: Case Study: Cedar Rapids Iowa
  - Nicholas Thomas, HDR
  - Andy McCoy, HDR

- Successful Hydrologic Dam Safety Modeling for the Largest Corps Reservoir
  - Katherine Werner, USAACE

### 2E: Dam Safety I
**Room: Mineral FG**

Moderators: Jacob Davis, USACE; and Seth Krause, WSP

- Introducing Outcomes from ICOLD 15th International Benchmark Workshop on Numerical Analysis of Dams - Seismic Analysis of Pine Flat Concrete Dam
  - Jerzy Salamon, USBR
  - Brian Reinicker, HDR
  - Ed Luttrell, HDR

- Historical Construction Documentation Used to Evaluate an Internal Erosion PFM at Watauga Dam
  - Benjamin Webster, Stantec
  - Alan Rauch, Stantec
  - Jim Bryant, TVA
  - CalebDouglas, TVA

- Cracked Embankment Erosion Testing
  - Peter Irey, USBR
  - Ted Howard, USBR

- Model of Internal Erosion in Earthen Embankment Dams with Non-Homogeneous Soil Parameters
  - Ali Presten, Geosyntec Consultants
  - Jai Pantahi, Geosyntec Consultants
  - Lucas DeMelis, Geosyntec Consultants
  - Glenn Rix, Geosyntec Consultants

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  - Jonathan Fanni, University of British Columbia
  - Maxiu Li, BC Hydro

- Mill Pond Dam Removal and Habitat Restoration - The Unbreakable Stream
  - Lloyd Dixon, Seattle City Light

### Interactive Presentations II

**Mineral ABC**

- Levee Certification: How Advanced Engineering Techniques Can Save $$$
  - Brad Bettag, Wood
  - Chris Ide, Wood
  - Thuy Patton, Colorado Water Conservation Board

- CFD Modeling for Spillway Assessments
  - Benin Israel Devadason, Mead & Hunt
  - Nick Hathaway, Mead & Hunt
  - Bill Kaufman, Iowa DOT

- Missouri River Levee 2D HEC-RAS Breach Inundation Modeling
  - Dan Jones, USAACE
  - Ben Lorenzen, USAACE

- After the Flood – Modeling Levee Breach Affected Areas in the Missouri River Valley
  - Andrew McCoy, HDR
  - Rusty Jones, HDR
  - Dave Claram, Iowa DOT
  - Bill Kaufman, Iowa DOT

- VBA-Based Tool Keeps Dam Operators Ahead of the Curve
  - Jesse Potrowski, Mead & Hunt
  - Shawn Puzen, Mead & Hunt
  - Nick Hathaway, Mead & Hunt
  - Jen Schuetz, Mead & Hunt

- Development of a Hydrologic Database to Inform Future Spillway Designs and Risk Analyses
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  - Elizabeth Isenstein, Schnabel

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  - Nicholas Thomas, HDR
  - Andy McCoy, HDR

- Successful Hydrologic Dam Safety Modeling for the Largest Corps Reservoir
  - Katherine Werner, USAACE

### Hydraulics & Hydrology

- Effects of Transverse Slopes of Steps on Flow over Stepped Spillways
  - Ahang Ali, University of Sulaimani
  - Moses Karakouzan, University of Nevada, Las Vegas
  - Omed Yousif III, University of Sulaimani

- Two-Dimensional Modeling of the Ka Loko Dam Failure Flood
  - Mustafa Altinakar, Argonne National Laboratory
  - Marcus McGrath, NCYCHE
  - Vijay Ramalingam, NCYCHE
  - James Demby, Jr., FEMA

- Missouri River Levee 2D HEC-RAS Breach Inundation Modeling
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- After the Flood – Modeling Levee Breach Affected Areas in the Missouri River Valley
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  - Andy McCoy, HDR

- Successful Hydrologic Dam Safety Modeling for the Largest Corps Reservoir
  - Katherine Werner, USAACE
Earthquake Engineering for Concrete Dams
Anil K. Chopra, University of California, Berkeley

3A: Concrete Dams III
Moderators: Jerzy Salamon, USBR, and Hillery Verruturini, USBR

Direct FE Method for Nonlinear Earthquake Analysis of Concrete Dams – Methodology
Arnejel Lakke, Norwegian Geotechnical Institute

Direct FE Method for Nonlinear Earthquake Analysis of Concrete Dams – Implementation
Arnejel Lakke, Norwegian Geotechnical Institute

Ground Motion Selection for Nonlinear Response History Analyses of Concrete Dams
N. Simon Kwong, The Cooper Union for the Advancement of Science and Art

Guatemala Dam: Construction of Intreim Risk Reduction Measures
Samuel Hutsell, USACE
Michael Miller, USACE
Jose Bermudez, PREPA
Edgardo Bermudez, USACE
Dennis Zeveney, USACE
Jacksonville District
Daniel Blaydes, USACE

Guatemala Dam: Emergency Response and Risk Informed Design
Gregg Batchelder Adams, USACE
Jose Bermudez, PREPA
John Kendall, USACE

Utilizing Innovative Concrete Techniques to Construct Complex Spillway Structures
James Murphy, Gannett Fleming, Inc.
Timothy Weber, Gannett Fleming, Inc.

Cheesman Dam Upstream Control: Hydraulic System Failure Analysis
Antonio Flori, Denver Water
Jeff Archer, Denver Water

Fake vs. Fact: How to Harness the Power of Social Media to Effectively Communicate with the Public and Press During a Dam Crisis
Jes Gearing, Gannett Fleming

EAPs for Levees, a Cost Effective Way to Reduce Life Safety Risk for Levees
Thomas Terry, USACE
Todd Kilpatrick, Levee District 12
William Smiley, USACE
Glenn Fulton, USACE

Public Dissemination of USACE Inundation Maps
Rebecca Ragon, USACE
Michelle Carey, USACE
Amanda Satter, USACE

Validating HEC-LifeSim 2.0: Lessons Learned from Application on Historic Events
Jason Needham, USACE
Woodrow Fields, USACE
Jesse Morrill-Winter, USACE
Stephanie Owen

Brennan Beam

Performance Monitoring Instrumentation for Mine Tailings Facilities
Robert Bachus, Geosyntec Consultants
Robert Snow, D’Appolonia
Charles Cobb, Alaska Department of Natural Resources

Geotechnical Design Considerations for Upstream-Constructed Coal Refuse Impoundments
Abeera Batool, GAI Consultants
Blaise Genes, GAI Consultants

Monitoring the Impacts of a Tailings Dam Failure Using Satellite Images
Gurbet Gurkan, Colorado School of Mines
Jaime Moraga, Colorado School of Mines
Sebnem Duzgun, Colorado School of Mines

An Overview of Probabilistic Methods for Stability Analysis of Tailings Dams
Natala Soares Rodrigues, Colorado School of Mines
H. Sebnem Duzgun, Colorado School of Mines

Update on the National Dam Safety Levee Initiative
Phoebe Percell, USACE

Little Falls in Name Only - Understanding Big Asset Risks for a Low Hazard Dam
M. Jonathan Harris, Schnabel Engineering
Paul Linnemann, Avista Corporation
Thomas Hepler, Schnabel Engineering

Evaluating Complex Systems as Part of a Semi-Quantitative Risk Assessment
Eric Halpin, Halpin Consultants
Dan Osman, HDR, Inc.
Doug Boyer, FERC
Elena Sassenkina, HDR Inc.

The Spencer Dam Failure Investigation
Mark Baker, Dam Crest Consulting
John Trojanowski, Trojanowski Dam Engineering
Marty Teal, WEST Consultants
Rob Ettema, Colorado State University

Embarkment Dams
Constant Volume Ring Shear Test to Measure Soil Undrained Strength for the Full Range of Strains
Blake Armstrong, USBR
Robert Rinehart, USBR

Critical State-Based Strength Interpretation of Foundation Sands at Duncan Dam
Dino Bernardi, California DWR
Ian Maki, California DWR
Robert Jaeger, California DWR

Seismic Stability Analysis of an Embankment Dam Founded on Low Plasticity Glacial Silt
Robert Rinehart, USBR
Justin Hall, USBR
Derek Wittwer, USBR

Probabilistic Methods for Post-Earthquake Embankment Slope Stability Analysis of a Hypothetical Embankment
Yixuan Sun, Stantec Inc.
Xuan Wu, Stantec Inc.
Fe Yang, Stantec Inc.
Sam Abbaspour, Stantec Inc.

Foundations
Evaluating Rock Foundations Beneath Aging Large Concrete Dams: Two Case Studies from British Columbia, Canada
Andrew Bayliss, Jr., Stantec
Lucy Philip, Stantec

Treating Excessive Seepage at the Dam Abutment of the Neelum Jhelum Hydroelectric Project
Joseph Kovacich, Stantec
Masrour Kizilbash, Stantec
Imran Hussain, Associated Consulting Engineers Pakistan
Nasir Abbas, National Engineering Services Pakistan (Pvt) Limited

Levees
Vision-Based Inspection and Health Assessment of Levees
Adda Athanasopoulos-Zekkos, University of California, Berkeley

Dimitrios Zekkos, University of Michigan
Michelle Basham, University of Michigan

Omaha Regional Resiliency Analysis Implications of the 2011 and 2019 Flood Events
Robert Beduhn, HDR

Rehabilitation Design for Dispersive Soil in Levees
Ardira Dushi, Arcadis U.S., Inc.
Michael Landis, IBWC, U.S. Section
Xochitl Aranda, IBWC, U.S. Section

The Consequence of Over Simplification of Seepage Models
Michael Hughes, AECOM
Abbas Abdollahi, AECOM
Mehrshak Meidani, AECOM
Richard Millet, AECOM

Erosion Resistance Evaluation of Biopolymer Enhanced Levee by Full Scale Experiments
Dukhan Lee, Korea Institute of Civil Engineering and Building Technology
Wan Kim, Korea Institute of Civil Engineering and Building Technology
Mynouhwan Kim, Korea Institute of Civil Engineering and Building Technology

Assessment of Freeboard and Embankment Protection for a Coastal- Inland Hybrid Levee
Nirjhar Shah, Wood
Wednesday, April 22 — 1:30 pm - 3:30 pm
CONCURRENT SESSIONS — TRACK 4

3-D Analyses of Lenihan Dam for the Loma Prieta Earthquake
Etan Dawson, AECOM
Lelio Mejia, Geosyntec Consultants

Return Periods of Ground Motions and Seismic Displacement
Justin Smith, FERC
Edgar Salire, FERC
Chris Wang, FERC

Seismic Deformations of a Levee Over Soft Clay of Varying Sensitivity
Tyril Outhes, University of California, Davis
Ross Boulanger, University of California, Davis

Seismo-VLAB: A Parallel, Object-Oriented Virtual Lab for Mesoscale Seismic Wave Propagation Problems
Danilo Kusanovic, Caltech
Elia Edreion, California State Polytechnic University, Pomona
Albert Kotke, Pacific Gas and Electric
Domniki Asimaki, Caltech

Scale Effects of Newmark Displacements Due to Embankment Height
Robert Jaeger, California DWR
Ian Maki, California DWR
George Hu, California DWR

Concrete Dams
Concrete Direct Shear Testing: A Comparison of Testing Procedures
Evan Lindenhoch, USBR
Richard Bearce, USBR
Westin Joy, USBR

A Practical Implementation of the Performance Based Evaluation of Post-Tensioned Anchorage in Concrete Dams
Andrew Pharm, Harvey Mudd College
Dana ShangGuan, Harvey Mudd College

Conklingville Dam: A Multi-Dimensional Exploration
David Railsback, Schnabel Engineering
Michael Taylor, Schnabel Engineering
Keith Toombs, Schnabel Engineering
Frederic Snider, Schnabel Engineering

Dam Rehabilitation: A Discussion of Karstic Foundations, Design and Treatment Challenges
Nagesh Malayala, AECOM
David Paul, Consultant
Juan Vargas, AECOM
Richard Millet, AECOM

Mosul Dam Emergency Stabilization Three Year Final Project Update
William Empson, USACE
Wade Anderson, USACE
Georgette Hiepas, USACE
David Sawitzki, AECOM
Juan Vargas, AECOM
Carlo Crippa, Trevi
Pierluigi Miconi, Trevi

Dam Safety War Stories
William Empson, USACE

Geologic Factors in the Siting and Conceptual Layout of the Aggregate Quarry at the Gross Reservoir Expansion Project
Dan Meier, AECOM
Doug Yadon, AECOM
Phil Sirles, Collier Geophysics
Paulo Virreira, Denver Water
Felipe Garcia, Stantec

Exploring Reservoir Operations: Development and Use of Induced Surcharge Envelope Curves
Kevin Fogel, WEST Consultants

Floodwalls and Closure Structure Design – A Recollection of Lessons Learned
Wesley Jacobs, Sr., HDR Engineering, Inc.
Jason Abendroth, HDR Engineering, Inc.

Consequence Categorization for Dam Safety Semi-Quantitative Risk Assessments
Gregg Scott, Scott Consulting, LLC
William Fiedler, HDR

Risk-Based Analysis and 3D Modelling Clarify Artesian Pressure Risk – An Example from a FERC RIDM Pilot Project
Robert Cannon, Schnabel Engineering
Fred Sigel, Schnabel Engineering
Frederic Snider, Schnabel Engineering

Abandonment Issues for Power Plants Adjacent to Urban Levees
Terry Sullivan, USACE

Relief Well Flow In the Real World (It’s Complicated!)
Mary Knopf, Wood
Randy Cook, Jr., Wood
Jo Tucker, Wood

3D Evaluation of Levee Cutoff Wall End-Around Underseepage for Fully-Penetrating Walls
Robert Jaeger, California DWR
Joseph Weber, Loyola Marymount University

Missouri River - 2019 Spring Flood - Levee Breach Repairs
Curtis Miller, USACE
Dan Pridal, USACE
Rick Podraza, USACE
Roger Kay, USACE
Chris Svendsen, USACE

An Enhanced Approach to SQRA Risk Matrices
David Bowles, RAC Engineers and Economists, LLC
and Utah State University Sanjay Chauhan, RAC Engineers and Economists, LLC

A Phased Approach to Understanding Your Spillways
Kenwarjit Dosanjh, HDR
David Sarkisian, California DWR

US Fish and Wildlife Service and US Army Collaboration to Determine the Inflow Design Flood for the Rocky Mountain Arsenal Dams
Amanda Hess, Gannett Fleming
Brad Jarass, U.S. Fish & Wildlife
Dave Hibs, U.S. Fish & Wildlife
Yan Wang, Gannett Fleming

Environment & Sustainability
Forecast-Improved Reservoir Operations: Where Are We Now?
Michael McMahon, HDR

Adobe Creek Dam: Turning an Emergency into an Opportunity
Trevor Mugele, W.W.Wheeler
Todd Street, W.W.Wheeler
Jerred Hoffman, Fort Lyon Canal Company
Wednesday, April 22 — 4:00 pm - 6:00 pm
CONCURRENT SESSIONS — TRACK 5

5A: Earthquakes (Concrete)
Room: Centennial F
Moderators: Najib Bouaanani, Polytechnique Montreal; and Alex Walsh, Gannett Fleming

5B: Construction & Rehabilitation III
Room: Centennial G
Moderators: Michael Miller, USACE; and Nick Patch, Clark Bros. Inc.

5C: Embankment Dams III
Room: Centennial H
Moderators: John France, JWF Consulting LLC; and Joels Malama, USBR

5D: Public Safety
Room: Mineral DE

5E: Foundations
Room: Mineral FG
Moderators: Bryan Simpson, USBR; and Andrew Little, HDR

Prediction of Hydrodynamic Loads on Dams and Spillway Gates
- Preliminary Findings from a Physical Test Facility
Josh Mortensen, USBR
Jerzy Salamon, USBR

Evaluation of Seismic Hazard for Ghazi-Barotha Hydroproject
of Pakistan
Muhammad Usman, National University of Sciences and Technology
Muhammad Zain, National University of Sciences and Technology
Qazi Mubasher Masood, Water and Power Development Authority of Pakistan
Altaf Iqbal, Associated Consulting Engineers (Pvt) Ltd.
Zahid Shehzad, Water and Development Authority of Pakistan
Ashar Khan, Water and Power Development Authority of Pakistan

On the Effects of Vertical Earthquake Accelerations on Seismic Demands
Within Dams and Appurtenant Structures
Najib Bouaanani, Polytechnique Montreal
Sayouba Tinta, Polytechnique Montreal
Siamak Ohadi, Polytechnique Montreal

Case Studies on the Seismic Performance of Vertical Lift Gates
Cee Chan, Hatch
James Rutherford, Hatch

Seismic Stability Assessment of Morning-Glory Structures
Including Rocking and Rebar Debonding
Maximiliano Mantola, Hatch
John Werner, Hatch
James Rutherford, Hatch
Colleen Woods, Hatch

12 Lessons Learned From 12 Years of Rehabilitating Small Urban
Embarkment Dams
Jeff Blass, AECOM
Portage Lakes, Ohio - East Reservoir Dam:
History, Evaluation and Remediation
Pete Nix, Tetra Tech
Donald Bruce, Geosystems

Best Value Procurement Process for the Chimney Hollow Reservoir Project
Joe Donnelly, Northern Water
Jeff Drager, Northern Water
Chris Mueller, Black & Veatch
Jeff Bair, Black & Veatch
David Bentler, Black & Veatch
Don Montgomery, Stantec

QA/QC in Dam Safety Construction Projects: Check the Box and For it or Something Actually Worth Careful Consideration?
Frank Blackett, FERC

Implementation of a Statewide Dam Construction Monitoring Plan
Chad Davis, HDR

Asphalt Core Embankment Dams (ACED) - Why, Where and How?
David Wilson, WALO USA
Damin Mueller, WALO International AG

An Update on the Chimney Hollow Hydraulic Asphalt Core Rockfill Dam
Donald Montgomery, Stantec
Christine Weber, Stantec
Wonnie Kim, Stantec

Construction Risk Management and Contingency Budget Allocation for Hydraulic Asphalt Concrete Core Rockfill Dam
Mark Thompson, Black & Veatch
David Bentler, Black & Veatch
Joe Donnelly, Northern Water
Don Montgomery, Stantec

West Silver Basin Dam - A Rockfill Dam with Asphaltic Concrete Core
Central Core
Michael Zusi, AECOM
Bill Snyder, AECOM
Daniel Swanson, AECOM
Jose Martinez, McMoran Morenci Inc. USA

Expression in Asphalt Core Dams And Dykes: A Great Accomplishment After Five Years of Impoundment
Jean-Pierre Tournier, HydroQuébec
Roxane Savard, Hydro-Québec
François Ferland, Hydro-Québec

Effective Emergency Exercise Planning Practices
Kelly Strife, Gannett Fleming
Alcia Baehl, Gannett Fleming

Moccasin Dam Flood Event, March 22, 2018 - Damage Assessment, Engineering Design and Construction of Interim Repair and Improvement
Ted Allen, San Francisco PUC
Jimmy Leong, San Francisco PUC

Public Safety Signage - Best Practices
Paul Meeks, Worthington Products Inc.

Improving Public Safety at Low Head Dams
Paul Schweiger, Gannett Fleming
Steve Davidheiser, Gannett Fleming

Creation of a Database of Low-Head Dams in the U.S.
Rolinn Hotchkiss, Brigham Young University

Charaterization and Evaluation of Potentially Movable Rock Blocks for Foundation Stability Analyses at the Gross Reservoir Expansion Project
Erik Newman, AECOM
Dan Meier, AECOM
Doug Yadon, AECOM
Paulo Virreia, Denver Water

2017-2019 Investigations of Subsurface Conditions at Mosul Dam
Georjea Hlepas, USACE

Scoggin's Option 3 RCC Dam alternative, 3D Site Geology Model Using Leapfrog Works Software
Andrew Little, HDR
Verena Winter, HDR

Integrating Dam Safety Risk into the Dam Site Exploration Framework for Design Projects
Derek Morley, Geosyntec Consultants
Brandon Lanthier, Geosyntec Consultants
Holly Nichols, California DWR

Failure, Emergency Response, Mitigation, and Engineering Geology of Guajataca Dam
Todd Loo, USACE
Dennis Zeveney, USACE
Jose Bermudez, Puerto Rico Electric Power Authority