A Balancing Act: Dams, Levees and Ecosystems

38th Annual Conference of the United States Society on Dams

Hyatt Regency Miami
The U.S. Society on Dams is committed to providing its employees, directors, officers, volunteers, members, contractors and event participants with an environment that is free from harassment, in any form.

USSD will not tolerate any form of harassment of or by an individual. Any person guilty of such behavior will be subject to disciplinary action, which may include loss of employment or contract, revocation of membership and/or immediate expulsion from the USSD-sponsored event.

The policy can be read in its entirety at www.ussdams.org/about/governance/.
Schedule at a Glance

Sunday, April 29
9:00 a.m. – 5:00 p.m.  
USSD Board of Directors Meeting  
Sponsored by Barnard

Monday, April 30
7:00 a.m. – 6:30 p.m.  
Registration Desk Open  
Breakfast for Board and Committee Chairs/Vice Chairs  
Sponsored by Global

9:00 a.m. – 4:30 p.m.  
Committee Meetings  
Opening Session  
Kickoff Reception in Exhibit Hall  
Sponsored by AECOM

Tuesday, May 1
7:00 a.m. – 5:00 p.m.  
Registration Desk Open  
Continental Breakfast in Exhibit Hall  
Plenary Session  
Break in Exhibit Hall  
Guest Meet and Mingle  
Plenary Session, continued  
Circle of Excellence Luncheon  
Sponsored by Gannett Fleming

1:30 p.m. – 3:00 p.m.  
Six Concurrent Technical Sessions – Track 1  
Break in Exhibit Hall  
Sponsored by Phillips & Jordan

3:30 p.m. – 5:30 p.m.  
Six Concurrent Technical Sessions – Track 2  
USACE TownHall Meeting  
Poster Session and Reception in Exhibit Hall  
Sponsored by Stantec

7:30 p.m. – 10:00 p.m.  
Sunset Over Miami party, Riverwalk Outdoor Terrace  
Sponsored by Worthington

8:00 p.m. – 10:30 p.m.  
YP Social Event, Area 31, Epic Hotel
Schedule at a Glance

Wednesday, May 2

6:30 a.m. 5K FUNds Run/Walk for Scholarship Fund
7:30 a.m. - 5:00 p.m. Registration Desk Open
7:30 a.m. - 8:30 a.m. Continental Breakfast in Exhibit Hall
8:30 a.m. - 10:00 a.m. Six Concurrent Technical Sessions – Track 3
10:00 a.m. - 10:30 a.m. Break in Exhibit Hall
10:30 a.m. - 12:30 p.m. Six Concurrent Technical Sessions – Track 4
12:30 p.m. -- 1:30 p.m. The Future through Education Luncheon

12:30 p.m. -- 1:30 p.m. Young Professional Mentoring Luncheon (YPs and invited mentors only)

1:30 p.m. - 3:00 p.m. Six Concurrent Technical Sessions – Track 5
3:00 p.m. - 3:30 p.m. Break in Exhibit Hall

3:30 p.m. Exhibition Hall closes
3:30 p.m. - 5:30 p.m. Six Concurrent Technical Sessions – Track 6
5:30 p.m. - 10:30 p.m. Special Event -- Marlins Baseball Game and Private Party
5:30 p.m. - 11:00 p.m. Motorcoach shuttles to and from baseball game

Thursday, May 3

7:30 a.m. - 5:00 p.m. Registration Desk Open

8:00 a.m. - 12 noon Words Hold Water – Raising the Communication Bar in the Dams and Levees Industry
8:30 a.m. - 11:45 a.m. Everglades Restoration
8:00 a.m. - 4:00 p.m Evaluation of Numerical Models and Input Parameters in the Analysis of Concrete Dams
8:00 a.m. - 5:30 p.m. Cutting Edge Rapid Flood Modeling: Hands-On with DSS-WISE™ Lite
8:00 a.m. - 5:30 p.m. Case Histories in Dam Safety Risk-Informed Decision Making
8:00 a.m. - 5:40 p.m. Construction of Cutoff Walls for Levees and Small Embankment Dams
11:30 a.m. - 1:00 p.m. Buffet Lunch for Field Tour and Workshop Participants

12:30 p.m. - 5:30 p.m.

Friday, May 4

8:00 a.m. - 6:00 p.m. Field Tour, Herbert Hoover Dike
**Young Professionals.** We welcome the participation of younger professionals in all conference activities. Reach out to folks wearing the “YP Advocate” ribbon, as they have a special interest in connecting with the emerging generation of dam professionals. All YPs are encouraged to attend the meeting of the USSD Committee on Young Professionals on Monday to provide insight regarding future initiatives and conferences. A YP Networking Social will be held on Tuesday from 8-10:30 pm at Area 31, in the Epic Hotel across the street from the Hyatt. It will be a casual setting for YPs to network with YPs and others who have an interest in connecting with YPs. A private luncheon for YPs and invited seasoned professionals will be held on Wednesday, and is intended as a first step in the development of a USSD mentorship program. Attendance is limited and YPs must have signed up for the luncheon on their conference registration.

**Special Session – Scholarship presentations.** Four outstanding PhD students have been named finalists for the USSD Scholarships. They will present their research on Tuesday, 1:30 to 3 pm.

**Poster Session.** Plan to visit the poster presentations during the reception in the Exhibit Hall on Tuesday from 5:30 to 7:30 p.m.

**Sunset Over Miami.** After the poster session reception on Tuesday evening, this fun outdoor party celebrates our collaborative friendship with the western hemisphere national committees known as INCA (the ICOLD National Committees of the Americas). The Hyatt’s Riverfront Terrace is the perfect venue to enjoy Latin-inspired food, music and entertainment in a festive atmosphere.

**Marlins Baseball Game.** Full conference registrants will enjoy a little bit of a South Beach vibe at Marlins Park overlooking right field, including a private area with food and beverages, 10 TVs and limited seating to watch the Marlins take on the Philadelphia Phillies. Motorcoach shuttles will operate from 5:30 pm until after the game to transport participants to and from the ballpark, about two miles from the Hyatt. Get your ticket and wristband at the USSD registration desk before noon on Wednesday.

**Field Tours.** Motorcoaches will depart from the front entrance of the Hyatt. Please gather in the lobby 15 minutes prior to departure. On each day, one motorcoach will return via Miami International Airport to drop off passengers for flights departing after 7:30 p.m. If you wish to be dropped at the airport, please stop by the USSD registration desk before noon on Wednesday.

---

**5K FUNds Run/Walk**

The fourth annual 5K FUNds Run/Walk to support the USSD Scholarship Fund will be held on Wednesday, May 2. Start your morning with your favorite USSD running buddies to get some circulation going before sitting in technical sessions. The event will begin at 6:30 am on a scenic course that begins and ends at the Hyatt. Stop by the 5K registration desk in the Riverfront Hall Lobby before Wednesday morning to receive your bib and/or register for the run. The registration fee is $40; if an early morning run isn’t your thing, you are welcome to support the scholarship fund by registering as a virtual runner.

**5K Donors as of 4/13/18**

- AECOM
- ASI Marine
- Ballard Marine Construction
- Barnard
- Construction, Inc.
- Bechtel
- Bisnett Family
- Byers Group
- Canary Systems
- CEATI
- D’Appolonia
- ENTEC
- FloodBreak
- Flow Science
- Freese and Nichols, Inc.
- Fugro
- Gannett Fleming, Inc.
- GEI Consultants, Inc.
- GENTERRA
- GEOSLOPE
- International Ltd
- Geokon
- Geosyntec Consultants, Inc.
- Golder
- GZA
- Hatch
- HDR
- KC Construction
- Kleinschmidt
- McMillen Jacobs Associates
- Mead & Hunt
- Measurand
- OBG
- Phillips & Jordan
- Quest Structures
- RAC Engineers and Economists
- Schnabel Engineering
- Stantec
- WEST Consultants
- Wood
- Worthington Products
- W.W. Wheeler
Exhibition Hours

Plan to visit exhibitors during the evening receptions, the continental breakfasts and refreshment breaks. The exhibition will close at 3:30 after the Wednesday break. The exhibit hall will be open beginning at 7 am on Tuesday and Wednesday.
### Sunday, April 29

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 pm - 6:00 pm</td>
<td>Registration Desk Open</td>
<td>Hyatt Regency Lobby</td>
</tr>
</tbody>
</table>

### Monday, April 30

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 am - 6:30 pm</td>
<td>Registration Desk Open</td>
<td>Riverfront Hall Lobby</td>
</tr>
<tr>
<td>9:00 am - 4:30 pm</td>
<td>Committee Meetings</td>
<td>Various</td>
</tr>
<tr>
<td>5:00 pm - 6:00 pm</td>
<td>Opening Session</td>
<td>Regency Ballroom</td>
</tr>
<tr>
<td></td>
<td>Welcome and Announcements, Dean Durkee, USSD President, Gannett Fleming, Inc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>USSD Highlights from 2017, Dean Durkee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ICOLD Update, Michael F. Rogers, ICOLD Vice President</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Introductions and Recognitions, Dean Durkee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leading by Example: Incorporating Sustainable Practices into Our Nation’s Dams and Levees, Kelly Schoeffer, Kleinschmidt Associates</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical Operation of K-Water’s Multi-Purpose Dams and Weirs, Dr. Kyeonsik Kim, General Director, Korea Water Resources Corporation (K-Water)</td>
<td></td>
</tr>
<tr>
<td>6:00 pm - 8:00 pm</td>
<td>Kickoff Reception and Exhibition Opening</td>
<td>Riverfront Hall</td>
</tr>
</tbody>
</table>

### Tuesday, May 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 am - 5:30 pm</td>
<td>Registration Desk Open</td>
<td>Riverfront Hall Lobby</td>
</tr>
<tr>
<td>7:00 am - 8:00 am</td>
<td>Continental Breakfast</td>
<td>Riverfront Hall</td>
</tr>
<tr>
<td>8:00 am - 10:00 am</td>
<td>Plenary Session</td>
<td>Regency Ballroom</td>
</tr>
<tr>
<td></td>
<td>Moderator — Christina Winckler, AECOM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Welcome and Introductions, Dean Durkee, USSD President, Gannett Fleming, Inc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Taking Restoration to New Heights: How Local Sponsor Manages Dams and Levees in South Florida, John Mitnik, Chief District Engineer, South Florida Water District</td>
<td></td>
</tr>
<tr>
<td>10:00 am - 10:30 am</td>
<td>Break</td>
<td>Riverfront Hall</td>
</tr>
<tr>
<td>10:30 am - 12 noon</td>
<td>Plenary Special Session: Lessons Learned in a Year of Uncertainty</td>
<td>Regency Ballroom</td>
</tr>
<tr>
<td></td>
<td>Critical Infrastructure in Conflict: Mosul Dam Lessons, Colonel Michael J. Farrell, Commander, Mosul Dam Task Force, USACE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Results of the Oroville Dam Spillway Incident Forensic Investigation, John W. France, Vice President, AECOM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Addicks and Barker: The Hurricane Harvey Experience, Rob Thomas, Chief of Engineering and Construction Division, Galveston District, USACE</td>
<td></td>
</tr>
<tr>
<td>12 noon - 1:15 pm</td>
<td>Circle of Excellence Luncheon</td>
<td>Jasmine/Hibiscus</td>
</tr>
<tr>
<td></td>
<td>Moderator — Dean Durkee, USSD President</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presentation of the Lifetime Achievement Award</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presentation of the Public Safety and Security of Dams Recognition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presentation of the Excellence in the Constructed Project Award</td>
<td></td>
</tr>
<tr>
<td>1:30 pm - 3:00 pm</td>
<td>Concurrent Technical Sessions Track 1</td>
<td>Various</td>
</tr>
<tr>
<td>3:00 pm - 3:30 pm</td>
<td>Break</td>
<td>Riverfront Hall</td>
</tr>
<tr>
<td>3:30 pm - 5:30 pm</td>
<td>Concurrent Technical Sessions Track 2</td>
<td>Various</td>
</tr>
<tr>
<td>5:30 pm - 6:30 pm</td>
<td>USACE TownHall Meeting</td>
<td>Monroe</td>
</tr>
<tr>
<td>5:30 pm - 7:30 pm</td>
<td>Reception, Exhibition and Poster Session</td>
<td>Riverfront Hall</td>
</tr>
<tr>
<td>7:30 pm - 10:00 pm</td>
<td>Sunset over Miami Party, Celebrating our INCA Friends</td>
<td>Outside, Riverwalk Terrace</td>
</tr>
<tr>
<td>8:00 pm - 10:30 pm</td>
<td>Young Professionals Networking Social</td>
<td>Area 31, Epic Hotel</td>
</tr>
</tbody>
</table>
### Wednesday, May 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 am</td>
<td>5K Scholarship FUNds Run</td>
<td>Riverwalk (behind hotel)</td>
</tr>
<tr>
<td>7:30 am - 5:00 pm</td>
<td>Registration Desk Open</td>
<td>Riverfront Hall Lobby</td>
</tr>
<tr>
<td>7:30 am - 8:30 am</td>
<td>Continental Breakfast</td>
<td>Riverfront Hall</td>
</tr>
<tr>
<td>8:30 am - 10:00 am</td>
<td>Concurrent Technical Sessions Track 3</td>
<td>Various</td>
</tr>
<tr>
<td>10:00 am - 10:30 am</td>
<td>Break</td>
<td>Riverfront Hall</td>
</tr>
<tr>
<td>10:30 am - 12:30 pm</td>
<td>Concurrent Technical Sessions Track 4</td>
<td>Various</td>
</tr>
<tr>
<td>12:30 pm - 1:30 pm</td>
<td>The Future through Education Luncheon</td>
<td>Jasmine/Hibiscus</td>
</tr>
<tr>
<td></td>
<td>Moderator— Dean Durkee, USSD President</td>
<td></td>
</tr>
<tr>
<td></td>
<td>USSD Gives Back: Presentation of Check to the Manifest Foundation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Announcement of 5K FUNds Run Winners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Announcement of 2018 Scholarships</td>
<td></td>
</tr>
<tr>
<td>1:30 pm - 3:00 pm</td>
<td>Concurrent Technical Sessions Track 5</td>
<td>Various</td>
</tr>
<tr>
<td>3:00 pm - 3:30 pm</td>
<td>Break</td>
<td>Riverfront Hall</td>
</tr>
<tr>
<td>3:30 pm - 5:30 pm</td>
<td>Concurrent Technical Sessions Track 6</td>
<td>Various</td>
</tr>
<tr>
<td>5:30 pm - 10:30 pm</td>
<td>Miami Marlins Baseball Game and Private Party</td>
<td>Marlins Park</td>
</tr>
<tr>
<td></td>
<td>Ticket holders will be transported to and from Marlins Park by motorcoach; transportation begins at 5:30 pm and will end immediately following the game.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outstanding Paper Awards will be announced during the event, prior to the game.</td>
<td></td>
</tr>
</tbody>
</table>

### Thursday, May 3

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 am - 5:00 pm</td>
<td>Registration Desk Open</td>
<td>Riverfront Hall Lobby</td>
</tr>
<tr>
<td>8:30 am - 11:45 am</td>
<td>Concurrent Workshops</td>
<td>Orchid B</td>
</tr>
<tr>
<td>8:00 am - 12 noon</td>
<td>1. Everglades Restoration</td>
<td>Tuttle</td>
</tr>
<tr>
<td>8:00 am - 4:00 pm</td>
<td>2. Words Hold Water – Raising the Communication Bar in the Dams and Levees Industry</td>
<td>Flagler</td>
</tr>
<tr>
<td>8:00 am - 5:40 pm</td>
<td>3. Evaluation of Numerical Models and Input Parameters in the Analysis of Concrete Dams</td>
<td>Monroe</td>
</tr>
<tr>
<td>8:30 am - 5:30 pm</td>
<td>4. Construction of Cutoff Walls for Levees and Small Embankment Dams</td>
<td>Orchid CD</td>
</tr>
<tr>
<td>8:00 am - 5:30 pm</td>
<td>5. Cutting-Edge Rapid Flood Modeling: Hands-On with DSS-WISE™ Lite</td>
<td>Brickell</td>
</tr>
<tr>
<td>11:30 am - 1:00 pm</td>
<td>Buffet Lunch for Workshop and Field Tour Participants</td>
<td>Riverfront South/Central</td>
</tr>
<tr>
<td>12:30 pm - 5:30 pm</td>
<td>Field Tour: Tamiami Trail</td>
<td>Hotel Lobby Entrance</td>
</tr>
</tbody>
</table>

### Friday, May 4

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am - 6:00 pm</td>
<td>Field Tour: Herbert Hoover Dike</td>
<td>Hotel Lobby Entrance</td>
</tr>
</tbody>
</table>

**Important Field Tour Information:** For both the Thursday afternoon tour, and the Friday tour, motorcoaches will depart from the front entrance of the Hyatt. Please gather in the lobby 15 minutes prior to departure. On each day, one motorcoach will return via Miami International Airport to drop off passengers for flights departing after 7:30 p.m. If you wish to be dropped at the airport, please stop by the USSD registration desk before noon on Wednesday.
1A: Conference Theme - Sustainability
Room: Monroe
Moderators: Nicholas Morgan and Kelly Schaeffer, Kleinschmidt Associates

Benefits of Using Existing Dams for Flood Mitigation in the Moadna Creek Watershed, Orange County, NY
Allen Estivalet, Gregory Shaffer and Michelle Bowen, WSP

Ecosystem Considerations in Dam Safety Inspection and O&M
Jonathan Keeling and Benjamin Webster, Stantec

The Many Lives of the Hillsborough River Dam, Tampa, FL
Stewart Vaughn, Gannett Fleming, Inc.; Jon Rahn, City of Tampa; and Tom Burke, Southwest Florida Water Management District

An Evaluation of the Capacity of Coastal Spillways under Projected Sea Level Rise and Storm Surge Conditions
Mark Wilsnack and Lichun Zhang, South Florida Water Management District

1B: Earthquakes - Concrete I
Room: Tuttle
Moderators: Eric Kennedy, FERC; and Mohamadreza Mostafa, Stantec

Analysis of Performance Based Testing of Lower Baker Dam
Guntherdich Sooch and Dan Curtis, Hatch; Ziyad Duran, Harvey Mudd College; Michael Lukavec, Puget Sound Energy; and Larry Nuss, Nuss Engineering, LLC

Methods to Better Understand Seismic Behavior – Part II
Aimee Corr, Guy Lund and Alex Walsh, Gannett Fleming; and Erin Gleason and Darren Brinker, Denver Water

New Insights into Seismic Design and Safety Evaluation of Dam Appurtenant Structures and Equipment
Najib Bouaanani, Polytechnique Montreal

Gross Dam - Raising Sigma to the 10,000 Year Return Period
Dina Hunt, Gannett Fleming, Inc.; and Christine Weber, Stantec

1C: Oroville Dam Spillway Incident
Room: Flagler
Moderators: Jessie Drayton and John France, AECOM

Erosion Protection for the Emergency Spillway at Oroville Dam
Franz-Werner Gerreszen, BAUER Maschinen GmbH; and Brett K. Manier, Drill Tech Drilling & Shoring, Inc.

The Oroville Dam Crisis: Warning and Human Response
Jason Needham, USACE; Dennis Milet, University of Colorado, Boulder; and John Sorensen, Oak Ridge National Laboratory (Retired)

Emergency Response Monitoring for Oroville Spillway
Kayla Ranney, Jaime Lukeb and Daniel Osmun, HDR; and Olivia Virgadamo, California Department of Water Resources

Oroville Update
Jeanne Kuttler, Department of Water Resources; and David Gutierrez, GEL Consultants

Conclusions from Evaluation of Tailings Dam Incidents
Clint Strachan and Brenna Van, Stantec

USSD Workshop Summary: Lessons Learned from Recent Tailings Dam Failures and Path Forward
Robert Snow, D’Appolonia Engineering; Amanda Adams, Stantec; Gregory Hebeler, Golden Associates, Inc.; and Phillip Crouse, Stantec

When a CCR Impoundment is Not a Tailings Dam
Robert Bouchis, Geosyntec Consultants; and Robert Snow, D’Appolonia Engineering

Numerical Analysis of Displacements in the Post-Exploitation Period of Tailings Dams with a Combined Construction Method
Ljupcho Petkovski and Stevcho Mitoiskov, University Sts Cyril and Methodus

Argonaut Dam Remediation
Richard Millet, Rekha Nanduri and Nick Plath, AECOM; and Tami Tresace, California Department of Toxic Substances Control

1D: Tailings Dams and CCR
Room: Miami Lecture Hall
Moderators: Carmen Bernedo Sanchez, Stantec; and Robert Snow, D’Appolonia Engineering

Selecting a Geomembrane System for a Lined Embankment Dam and Reservoir Project
Chad Hoover, Paul Schweiger, Trent Dreese and Cari Beenenga, Gannett Fleming, Inc.; and Anthony Nokovich, American Water Company

Raw Water Storage Impoundment on Critical Path for Savannah Harbor Expansion Project
Stephen Whiteside, CDM Smith; Danielle Neamtzu, Shayne Wood and Robert Nagel, CDM Smith; and Nathan Bryan, USACE

Defect Seepage Modeling
Mike McCaffrey, Kevin Finn, Paul Shiers and Peter Bouchie, WSP

Bel Air Impoundment – Do All Dams Need a Drain?
Joanna Scafford and Cari Beenenga, Gannett Fleming, Inc.; John Roche, MDE Dam Safety Division; and Anthony Nokovich, American Water Company

1E: Embankment Dams I
Room: Brickell
Moderators: Carlos Cerpa, USACE; and Joseph Kulo, Arcadis

Relative Humidity Inhibitive Coatings for the Reduction of Degradation Caused by Active Alkali-Aggregate Reactions in Dams
Jonathan Blanchard, University of Arkansas

Investigation of Backwards Erosion by Data Driven Modeling
Carolyne Bocovich, Colorado School of Mines

Numerical Analysis of Embankment and Berm Settlement Based on InSAR Remote Sensing Measurements
El Hachemi Bouali, Michigan Technological University

Satellite-Based Radar Remote Sensing for Monitoring of Dams
Sean Salazar, University of Arkansas

1F: Scholarship Finalists
Room: Orchid BCD
Moderator: Tina Stanard, Freese and Nichols, Inc.

Remote Sensing for the Reduction of Degradation Caused by Active Alkali-Aggregate Reactions in Dams
Jonathan Blanchard, University of Arkansas

Numerical Analysis of Embankment and Berm Settlement Based on InSAR Remote Sensing Measurements
El Hachemi Bouali, Michigan Technological University

Satellite-Based Radar Remote Sensing for Monitoring of Dams
Sean Salazar, University of Arkansas

Short presentations will be highly focused presentations of 8-10 minutes.

Long presentations will vary in length from 15 to 30 minutes, depending on the number of presentations in the track.
Tuesday, May 1  •  3:30 pm to 5:30 pm
CONCURRENT SESSIONS TRACK 2

2A: Reservoir Sediment Management
Room: Monroe
Moderators: Daniel Pridal, USACE; and Martin Teal, WEST Consultants, Inc.

Review of the Reservoir Sedimentation Information (RSI) Database and Inventory of Known Sediment Issues at USACE Reservoirs
Paul Boyd, Bryan Baker and Rachel Schultz, USACE

A Comparison of Reservoir Storage Capacity and Sediment Depletion
Daniel Pridal and Paul Boyd, USACE

Sediment Dredging of Reservoirs for Long-Term Sustainable Management
Timothy Randle, Bureau of Reclamation; Stanley Ekren, William Hanson and Robert Ramsdell, Great Lakes Dredge & Dock Company, LLC

Three-Dimensional Evaluation of Bathymetric Change and Sediment Infill in a Hydropower Reservoir
Mark Velleux, James Hallden, Ruta Rugabandana and James Fitzpatrick, HDR

2B: Earthquakes - Concrete II
Room: Tuttle
Moderators: Vik Isr-Ahola, Stantec; and Phoebe Percell, HDR

Predicting Dam Response to Seismic Loading Conditions Using Performance Based Testing
Ziyad Duron and Maggie Gelhar, Harvey Mudd College

A Systems-Based Characterization of Foundation Interaction Effects in Concrete Dams
Ziyad Duron and Kristin Lie, Harvey Mudd College

Earthquake Analysis of Concrete Dams, including Dam-Water-Foundation Interaction
Arkjell Lokie, Norwegian University of Science and Technology; and Anil Chopra, University of California, Berkeley

Considerations Regarding Analysis Parameters for Two-Dimensional Nonlinear Seismic Response Analysis of a Concrete Gravity Dam
Osmar Penner, Jeff Vathan, Brent Bergman, Soheil Razavi-Darbar and David Queen, BC Hydro

Nonlinear Seismic Analysis of an Arch Dam
Guinderbir Sooch and Dan Curtis, Hatch; and Toby Brewer, Tacoma Power

2C: Construction - River Diversions
Room: Flagler
Moderators: Jeff Hill, Hayward Baker; and Andrew Verity, Terracon

Addressing Site Specific Challenges by Staged Construction of the Red Rock Hydroelectric Project
Rachael Bissett, Thomas Andrews and Nathaniel Grossmann, Stantec

Cellular Cofferdams as Permanent Hydropower Dam Structures
Marie Gutierrez Co and Simon Heru Prasetyo, Colorado School of Mines

Not Giving Up Hope – Third Time’s the Charm with Hope Mills Dam
Corey Schaaf, Mark Landis and Aaron, Collins, Schnabel Engineering

The Life and Death of TED (The Temporary Embankment Dam at the New Folsom Dam) – Auxiliary Spillway
Jeffrey Wissmieski and Jeffrey Allen, HDR

Design and Construction of the New Folsom Dam Spillway Approach Channel
Erik Newman, AECOM and Michael Forrest, AECOM; Michael O’Sullivan, COWI; Kyle Kellog, USACE; and Jeffrey Wissmieski, HDR Inc.

Ensuring Dam Safety without a Spillway during Construction at Anderson Dam
Brian Gettinger, Black & Veatch; Chuck Anderson, Schaff & Wheelbar; Jack Xu and Victor Gutierrez, Santa Clara Valley Water District; and Emily Schwartz, Black & Veatch

Mosul Dam: An Epoch in the Making
David Paul, USACE; Juan Vargas and Nagesh Malavala, AECOM; and Natiq Ahmed Abdullah, Iraq Ministry of Water Resources

Mosul Dam Grouting: Listening to the Telltale Signs of the Ground
David Paul and Matt Shesker, USACE; and Juan Vargas and Nagesh Malavala, AECOM

Final Results of 3D Geologic Modeling at Boundary Dam: from Abutment Stability to Rock Block Stabilization
Robert Cannon, Fred Snider, Gary Rogers and J. Hawkins Gagnon, Schnabel Engineering; Kimberly Pate and Andre Ball, Seattle City Light

A Comparison of Barrier Wall Types and Methods for Controlling Seepage through Embankment Dams and Levees
Joseph Kula, Arcadis; Gianfranco Di Cicco, GDConsulting, LLC; and Timothy Newton, Arcadis

Large Slope and Foundation Stability Problems of Three Dams
Camilo Marulanda, INGETEC

Challenges and Learnings in Execution of Spillway Flip-Bucket - A Case Study of Koldam HEP
Vinod Kumar Muruva and Prashant Narayan Gaur, NTPC Limited

Comparison of Measuring Effective Grouting Pressures
Dmitri Ivanov and Michael Xu, Advanced Construction Techniques

2D: Foundations
Room: Miami Lecture Hall
Moderators: Philippe Chopra, University of Technology; and Anil Arnkjell Lokke, Norwegian Foundation Interaction of Concrete Dams, Earthquake Analysis and Aaron, Collins, Schnabel with Hope Mills Dam

Looking at the Making
Vinod Kumar Muruva and Prashant Narayan Gaur, NTPC Limited

Using Semi-Quantitative Risk Assessment to Allow Safe Storage in a Reservoir
Jessie Drayton, AECOM; Warren Wade, Fort Carson Directorate of Public Works; Andrew Barry, USACE; and Don Pouler, AECOM

Remote Sensing
Inventory of Previously Undocumented Dams
Dan Schmutz, Danny Goodding and Valerie Harbal, Greenman-Pedersen, Inc.; and Art Sengupta, Florida Department of Environmental Protection

Evaluating Leakage
Through the Rock-Filled Juranah Dam
Kirk Lowery, Arcadis U.S., Inc.

Risk Informed Design of Large Concrete ( RCC ) Dams in High Seismic Hazard Region
Keith Ferguson, Keith Moen, Dan Osmun, Farzad Abedzadeh and Scott Anderson, HDR Engineering, Inc.

Balancing Risk and Resource Values at Grama Dam & Comanche Dam

South Bay Seismic Retrofits: Project Updates
Megan Puncke and Patrick Allen, Black & Veatch; and Victor Gutierrez and Bal Gangoo, Santa Clara Valley Water District

2E: Dam Safety I
Room: Brickell
Moderators: Najib Bouaana, Polytechnique Montreal; and Emily Schwartz, Black & Veatch

Using Semi-Quantitative Risk Assessment to Allow Safe Storage in a Reservoir
Jessie Drayton, AECOM; Warren Wade, Fort Carson Directorate of Public Works; Andrew Barry, USACE; and Don Pouler, AECOM

Remote Sensing
Inventory of Previously Undocumented Dams
Dan Schmutz, Danny Goodding and Valerie Harbal, Greenman-Pedersen, Inc.; and Art Sengupta, Florida Department of Environmental Protection

Evaluating Leakage
Through the Rock-Filled Juranah Dam
Kirk Lowery, Arcadis U.S., Inc.

Risk Informed Design of Large Concrete ( RCC ) Dams in High Seismic Hazard Region
Keith Ferguson, Keith Moen, Dan Osmun, Farzad Abedzadeh and Scott Anderson, HDR Engineering, Inc.

Balancing Risk and Resource Values at Grama Dam & Comanche Dam

South Bay Seismic Retrofits: Project Updates
Megan Puncke and Patrick Allen, Black & Veatch; and Victor Gutierrez and Bal Gangoo, Santa Clara Valley Water District

2F: Levees I
Room: Orchid BCD
Moderators: Danielle Neamtu, CDM Smith; and John Rice, Utah State University

Characterizing the Reliability of Earthen Levees using System Response Curves Derived from Uncertainty Analysis of Geotechnical Simulation Models
Martin Schultz, Fred Tracy, Ghada Elithy, Danny Harrodson, Jodi Ryder and Maureen Corcoran, USACE

Critical Pool Level for Drawdown Analysis of Earth Embankment Dams
Krisha Shadakapan and Joseph Kula, Arcadis

Reliability
Underseepage Assessment of Levees Incorporating Geomorphic Features
Lourdes Polanco Boulware and John Rice, Utah State University

Parametric Study of Levee Saturation for Undrained Rapid Drawdown Analysis
Katie Poston, Prince Turkson and Daniel VandenBerge, Tennessee Tech University

Transient SEEP2D for Finite Element Seepage Modeling of Levees with Enhanced Features
Fred Tracy, Lucas Walshire and Maureen Corcoran, USACE
Liquefaction of Gravelly Soils: A Gray Area in Engineering, Design and Rehabilitation of Embankment Dams
Sam Abbaszadeh and Xuan Benezri, Geosyntec Consultants
Moderators: Rodney Harris, Schnabl Engineering; and Ed Toms, AECOM

Relining Willow Creek Outlet Works in the Dry, Divers Help Get a Seal
Dirk deGroot, Global Diving Consultants, Inc.; and Stephanie Murphy, Underwater Engineering Consultants, Inc.

Across the Oceans to Our Backyard: How ICOLD’s Programs Complement USDD’s Focus on Sustainability
In this interactive session, learn what dam and levee practitioners are doing globally and locally, what stakeholders and regulators require, and how, together, USDD members can promote sustainable water supply and management infrastructure. Two innovative U.S. projects will be presented to demonstrate how collaborative approaches are being used to lead the way in implementing sustainable water management practices.

Advanced Programmatic Framework for Spillway Inspection and Potential Failure Modes Assessment
A. Firoozfar, K. Dosanjh, K. Moen, E. Zapel, and T. Ford, HDR

Do No Harm . . . and the Importance of Owner, Regulator and Consultant Collaboration
D. Lord, FERC; W. Christian, Chelan County PUD; and M. Mishalanie, Grant County PUD

Generalized Programmatic Framework for Spillway Inspection and Potential Failure Modes Assessment
D. Lord, FERC; W. Christian, Chelan County PUD; and M. Mishalanie, Grant County PUD

Enhancing Dam Safety in the City of Dallas
Jason Vazquez and Gail Charles, Arcadis; Kimberly Brashear, Dallas Water Utilities and Kimberly Dewailly, Trinity Watershed Management
Wednesday, May 2 • 10:30 am to 12:30 pm
CONCURRENT SESSIONS TRACK 4

4A: Earthquakes - Embankments II
Room: Monroe
Moderators: Donahue, JLD Engineering; and Nuss, U.S. Army Corps of Engineers

Dynamic Deformation Analysis for the Candelaria Rockfill Dam
Tiffany Adams, Masood Kohfar, and Richard Davidson, AECOM; and Scott Lehman, Lundin Mining Corporation

Seismic Risk Screening of Embankment Dams
Chris Hunt, Glenn Rix, Zahra Amini and David Umberg, Geosyntec Consultants; and Jennifer Donahue, JLD Engineering, Inc.

Soil Strength Measurement over a Range of Strains for Embankment Dam Deformation Modeling
Robert Kinehart and Blake Armstrong, Bureau of Reclamation

Fragility Curves for Hardfill Dams under Seismic Loading
Juan Mayoral and Adriana Badillo, UNAM

Case Studies of Rapid Dam Break Modeling during Flood Events
Wesley Crosby, USACE

Influence of Breast Parameter Uncertainty on Dam-Breach Flow Modeling and Mapping with DSS-WISE™ Lite
Mustafa Alinakar, Marcus McGrath and Vijay Ramalingam, NCHE, the University of Mississippi; and James Dambly, FEMA

Probabilistic Dam Break Modeling Using HEC-RAS and McBridge
Christopher Goodell, Suzanne Monk and Aaron Lee, WEST Consultants; Roger Raeburn and Amit Karki, PacificCorp; and Doug Johnson, FERC

Rapid Response Flood Inundation Modeling of a Compromised Coastal Levee System during Hurricane Season
Alex Nelson, Alex Ubben, and Corby Lewis, USACE

When a 2-Dimensional Dam Break Model Leads to Floodplain Revisions, Risk Informed Urban Re-Development, and Green Infrastructure Improvements
Kevin Ruswick and Gregory Daviero, Schnabel Engineering; and William Simcoe, City of Albany

Corps Water Management System Implementation and Applications in Mobile District of USACE
Bailey Crane, USACE; and Henry Hu, WEST Consultants, Inc.

4B: H&H - Dam Break and Reservoir Modeling
Room: Tuttle
Moderators: Greg Paxson, Schnabel Engineering; and Jennifer Gagnon, HDR

Challenging "About-Face" for Courtright Dam
Scott Huntsman, Black & Veatch Corporation

Embarkment Piping Repair
Seth Krause, Mike McCaffrey, Paul Shiers and Olga Zabawa, WSP

Rehabilitation of Kebar Dam, the World’s Oldest Masonry Dam under Operation
Hossein Marshedian, Black & Veatch; and Habib Leyladi, Kamandab Consultant Engineering Co.

How to Evaluate Prestressed Legacy Anchors in Dams
Donald Brace, Geosystems, L.P.; John Wolfhope, Freese and Nichols, Inc.; and Chris Hayes, CEATI International

4C: Construction - Rehabilitation I
Room: Flaggler
Moderators: Jesse Kropelnicki, WSP; and Vinod Batta, SNC Lavalin

Tidal Tributary Restoration by Modification of Salinity Control Structures
Scott Deitche, GPI; Ed Sherwood, Tampa Bay Estuary Program; and Nancy Norton and Lizzanne Garcia, Southwest Florida Water Management District

A View from the Trenches – Lessons Learned Planning and Permitting New Water Storage Projects
Blaine Dwyer, HDR

Boundary Dam TDG (Total Dissolved Gas) Analysis Using CFD Model (FLOW-3D)
John Wendelbo, Flow Science, Inc.; and Nikou Jalayeri and Joe Groeneveld, Hatch

Environmental Recovery from Siltation and Dam Failures along St. Vrain Creek, Colorado
Richard Tacher and Clint Brown, Engineering Analytics; and Jesse Rounds, Boulder County Parks and Open Space

Getting out of the Rough: Designing and Constructing Above Ground Impoundments to Suit Florida’s Water Quality and Supply Needs
Richard LeBlanc, HDR

4D: Conference Theme – Water Quality and Supply
Room: Miami Lecture Hall
Moderators: Zach Whitten, Stanec; and Hans Hasnay, Rizzo International

4E: Dam Safety III
Room: Brickell
Moderators: Elizabeth Landowski, Gannett Fleming; and Rachael Binsant, Stanec

4F: Levees II
Room: Orchid BCD
Moderators: Steve Whiteside, CDM Smith and Meredith Beswick, Kleinfelder

Dynamic Deformation Analysis for the Candelaria Rockfill Dam
Tiffany Adams, Masood Kohfar, and Richard Davidson, AECOM; and Scott Lehman, Lundin Mining Corporation

Seismic Risk Screening of Embankment Dams
Chris Hunt, Glenn Rix, Zahra Amini and David Umberg, Geosyntec Consultants; and Jennifer Donahue, JLD Engineering, Inc.

Soil Strength Measurement over a Range of Strains for Embankment Dam Deformation Modeling
Robert Kinehart and Blake Armstrong, Bureau of Reclamation

Fragility Curves for Hardfill Dams under Seismic Loading
Juan Mayoral and Adriana Badillo, UNAM

Case Studies of Rapid Dam Break Modeling during Flood Events
Wesley Crosby, USACE

Influence of Breast Parameter Uncertainty on Dam-Breach Flow Modeling and Mapping with DSS-WISE™ Lite
Mustafa Alinakar, Marcus McGrath and Vijay Ramalingam, NCHE, the University of Mississippi; and James Dambly, FEMA

Probabilistic Dam Break Modeling Using HEC-RAS and McBridge
Christopher Goodell, Suzanne Monk and Aaron Lee, WEST Consultants; Roger Raeburn and Amit Karki, PacificCorp; and Doug Johnson, FERC

Rapid Response Flood Inundation Modeling of a Compromised Coastal Levee System during Hurricane Season
Alex Nelson, Alex Ubben, and Corby Lewis, USACE

When a 2-Dimensional Dam Break Model Leads to Floodplain Revisions, Risk Informed Urban Re-Development, and Green Infrastructure Improvements
Kevin Ruswick and Gregory Daviero, Schnabel Engineering; and William Simcoe, City of Albany

Corps Water Management System Implementation and Applications in Mobile District of USACE
Bailey Crane, USACE; and Henry Hu, WEST Consultants, Inc.

Challenging "About-Face" for Courtright Dam
Scott Huntsman, Black & Veatch Corporation

Embarkment Piping Repair
Seth Krause, Mike McCaffrey, Paul Shiers and Olga Zabawa, WSP

Rehabilitation of Kebar Dam, the World’s Oldest Masonry Dam under Operation
Hossein Marshedian, Black & Veatch; and Habib Leyladi, Kamandab Consultant Engineering Co.

How to Evaluate Prestressed Legacy Anchors in Dams
Donald Brace, Geosystems, L.P.; John Wolfhope, Freese and Nichols, Inc.; and Chris Hayes, CEATI International

Balancing Costs and Benefits: Value Engineering of Native American Dams Throughout the United States
Matthew Young and William Shuter, U.S. Bureau of Indian Affairs; and Allison Knaak, MBS, LLC

Using Soil-Cement to Construct an Overtopping Gravity Dam
Pete Nix and Steven Riedy, Stantec; and Hans Hasnay, Rizzo International

Tidal Tributary Restoration by Modification of Salinity Control Structures
Scott Deitche, GPI; Ed Sherwood, Tampa Bay Estuary Program; and Nancy Norton and Lizzanne Garcia, Southwest Florida Water Management District

A View from the Trenches – Lessons Learned Planning and Permitting New Water Storage Projects
Blaine Dwyer, HDR

Boundary Dam TDG (Total Dissolved Gas) Analysis Using CFD Model (FLOW-3D)
John Wendelbo, Flow Science, Inc.; and Nikou Jalayeri and Joe Groeneveld, Hatch

Environmental Recovery from Siltation and Dam Failures along St. Vrain Creek, Colorado
Richard Tacher and Clint Brown, Engineering Analytics; and Jesse Rounds, Boulder County Parks and Open Space

Getting out of the Rough: Designing and Constructing Above Ground Impoundments to Suit Florida’s Water Quality and Supply Needs
Richard LeBlanc, HDR

Proactive Thinking in Dam Safety
Matthew Balven and Dean Durkee, Gannett Fleming

Nepal Dam Safety Inspections and Insights:
James Rutherford, Richard Donnelly and Peter Rodrigue, Hatch; Bill Moler and Charly Cadou, Manatoba Hydro International; Rajeswar Man Sulyja, TMS; and Pravin Karki, World Bank Group

The Use of Probabilistic Techniques to Supplement Deterministic Dam and Levee Design Methodologies
Scott Burch and Jason Valeria, Gannett Fleming, Inc.

Integrating Dam Safety Risk into a Traditional Dam Design Project
Derek Morley, USACE

The Big F-N Plotting Style: Right for Every Organization?
Donald Bruce, Geosystems, Ltd.; and Levee Design Insights:
Richard Karki, World Bank Group

Case Studies of Rapid Dam Break Modeling during Flood Events
Wesley Crosby, USACE

Influence of Breast Parameter Uncertainty on Dam-Breach Flow Modeling and Mapping with DSS-WISE™ Lite
Mustafa Alinakar, Marcus McGrath and Vijay Ramalingam, NCHE, the University of Mississippi; and James Dambly, FEMA

Probabilistic Dam Break Modeling Using HEC-RAS and McBridge
Christopher Goodell, Suzanne Monk and Aaron Lee, WEST Consultants; Roger Raeburn and Amit Karki, PacificCorp; and Doug Johnson, FERC

Rapid Response Flood Inundation Modeling of a Compromised Coastal Levee System during Hurricane Season
Alex Nelson, Alex Ubben, and Corby Lewis, USACE

When a 2-Dimensional Dam Break Model Leads to Floodplain Revisions, Risk Informed Urban Re-Development, and Green Infrastructure Improvements
Kevin Ruswick and Gregory Daviero, Schnabel Engineering; and William Simcoe, City of Albany

Corps Water Management System Implementation and Applications in Mobile District of USACE
Bailey Crane, USACE; and Henry Hu, WEST Consultants, Inc.
Dynamic Behavior of CFEDs Subjected to Strong Seismic Excitation and a Case Study
Hanqu Toton, Eskisehir Osmangazi University and Dam Safety Association, Turkey

Site Characterization and Seismic Stability Analysis of Stone Canyon Dam
Ethan Dawson, Nesa Nesuraj, Dennis Nguyen, Wolfgang Roth and Christopher Goetz, AECOM; and Junping Hu and Francesco Tatone, Los Angeles Department of Water and Power

Seismic Evaluation of Electric Lake Dam Using Two-Dimensional and Three-Dimensional Methods
Masood Kafash, Tiffany Adams, Jennifer Williams, and Ethan Dawson, AECOM; and Roger Roeburn, PacifiCorp

Why CFD Modelling Should Be a Spillway Designer’s Best Friend
Bennjamin Israel Devadason and Paul Sweiger, Gannett Fleming, Inc.

Applications of CFD at Hydraulic Structures in Select Levees in South Florida
Mataheel Ansar and Z. Zeng, South Florida Water Management District

Developing Hydraulic Design Criteria for a Fusede Semi-Labyrinth Weir Using 2D and CFD Models at Duke Energy’s-Cedar Cliff Hydroelectric Development
Adrian Strain and Joel Bilodeau, HDR; and John Eddy and Brad Keaton, Duke Energy

Physical Modeling of Air Demand at Cedar Cliff Dam
Dan Gessler, Andy Johansson and Chris Miller, Alden Research Laboratory; Jon; Eddy and Brad Keaton, Duke Energy; and Hassan Kocahan, Hydroplus

CFD Modeling of Piano Key Weirs: Validation and Numerical Parameter Space Analysis
John Wendelbo and Brian Fox, Flow Science

Size-Scale Effects and Piano Key Weir Hydraulics
Blake Tulis, Utah State University; and Nathan Young, Schnabel Engineering

An Update on Le Romaine Complex, the Most Important Hydroelectric Project Under Construction in North America
Vlad Liviu Alcacsu, Hydro Quebec

C.W. Bill Young Regional Reservoir Rehabilitation Project
Joanna Scronford and Elizabeth Landowski, Gannett Fleming, Inc.

Design and Construction of the Oakdale Spillway Capacity Expansion Manoshree Sundaram and Jason Hedien, Stantec; and Justin Darling, NIPSCO (Northern Indiana Public Service Company)

Swan Lake Dam Raise
Randy Presleigh, McMillen Jacobs Associates

Decision Making for Ecological Habitat Restoration at Decommissioned Ash Impoundments
Nicholas Morgan, Kleinschmidt; and Steve Cahoon, Duke Energy

Can Raptors Protect Levees Better than Rodenticides?
Karl Novak and David Torf, Ventura County Watershed Protection District

Considerations for Wildlife During Design, Construction and Operation of the C-44 Project
Susan Ray, HDR

Fish Passage Facilities at the Alameda Creek Diversion Dam, Final Design and Construction Update, California
Karl Tingwald, AECOM; Yen Ng, Susan Hou and Bryan Dessaire, San Francisco Public Utilities Commission; Mike Garelo, HDR Engineering; and Sam Gambino, AECOM

Discussion on the Application of Advanced Finite Element Technology to Dam Engineering
Mahmoodreza Mostafa and Vik Isa-Ahola, Stantec

Uncertainty Quantification in Probabilistic Assessment of Concrete Dams: Cloud Analysis
Mohammad Amin Hamedi-Ardehili and Victor Saouma, University of Colorado Boulder

Research Needs for Concrete Dams
Robert Hall, Engineering Innovations, LLC; Larry Nuss, Nuss Engineering, LLC; and Ziyad Duron, Harvey Mudd College

Concrete Tensile Strength Derived from Direct and Splitting Tests from Existing Dams
Dan Curtis and Gurinderbir Sooch, Hatch; and Husein Karmien, AECOM

Concrete Lift Line Shear Strength Parameters Compared to Other Laboratory Determined Properties
Evan Lindemann, Bureau of Reclamation

Harvey Rainfall and Probable Maximum Precipitation—What Happened and How
William Kappel, Applied Weather Associates

San Antonio River Authority, Case Study
Wayne Tschirhart, San Antonio River Authority

Lessons Learned from Midwest Floods 2008 and 2011—Community Approach to Rebuilding Flood Risk Reduction Infrastructure
Bob Beduhn, HDR

Netherlands Approach to Flood Control, Including Room for the River Program—Policies and Implementation Challenges
Cees Henk Oostinga and Robert M. Slomp, Rijkswaterstaat Centre for Water Management

Risk Transfer Issues and Insurance and Finance Solutions for Dam and Levee Safety
Samantha Medlock, Willis Towers Watson

Wednesday, May 2 • 1:30 pm to 3:00 pm
CONCURRENT SESSIONS TRACK 5

Long Presentations (15-30 minutes)

Short Presentations (8-10 minutes)
Wednesday, May 2 • 3:30 pm to 5:30 pm
CONCURRENT SESSIONS TRACK 6

6A: Public Safety
**Room: Monroe**

Moderators: William Foss, Gannett Fleming; and Paul Meeks, Worthington Products, Inc.

1. **PUBLIC SAFETY AROUND DAMS**
   Panel Discussion:
   - Statistics of Public Safety Incidents at U.S. Dams in 2017
     - Paul Schweiger, Gannett Fleming, Inc.; and Anthony Bennett, Ontario Power
   - 3D Modelling of Waterway Barriers – Increasing Public Safety and Material Collection, Bypass, and Removal
     - Greg Saunders, Revelstoke Institute of Technology
     - Randy Fessler, California Institute of Technology
     - Manoel Freitas, Diseño Ejecutivo SA de CV

2. **EMERGENCY PREPAREDNESS**
   Panel Discussion:
   - Balancing Dam Safety Risk Communication
     - Edward Stowasser, USACE
   - Emergency Response & Recovery
     - Sharon Roach, Tacoma Power and James Demby, FEMA
   - Emergency Planning for Dams/Technical Assistance
     - Preston Wilson, James Demby and Nicholas Slepzoek, FEMA; Mark Slauer, VA Department of Emergency Management; and Adam Jachimowicz,Argonne National Laboratory

3. **EMERGENCY RESPONSE LESSONS LEARNED**
   Panel Discussion:
   - Practicing for a Hurricane - A Gate Operations Simulation at Lake Brandt Dam
     - Laura Shearn-Feinster and Gerald Robblee, Schnabel Engineering; and Steven Drew, City of Greensboro
   - Storm Transposition Methodology
     - Advancements used in the Bear River
     - Hydroelectric Project Hazards Study
     - Alyssa Hendricks Dietrich, Jason Caldwell, Victoria Sankovich Bahls and Tye Parzybok, MetStat, Inc.; and Roger Roeburn and Amit Karhi, PacificCorp
   - Determining PMP for Florida – You Can’t Rely on HMR 51
     - Bill Koppel, Geoff Muhlestein and Doug Huitstrand, Applied Weather Associates
   - Exceedance Probability of the Possible Maximum Flood - Implications for Dam Safety Decisions
     - David Margo, USACE
   - Phased Approach to Modeling for Bluestone Dam Spillway Modification
     - Dana Moses and Nicholas Koutsunis, USACE
   - Physical Model of Spillway and Reservoir Debris Interaction
     - Kent Walker, Jaron Hansenbalg, Shannon Monahan and Nate Sprague, Bureau of Reclamation
   - Flood Debris Considerations at Dams
     - Frederick Lux III and Matt Wood, Stantec

3. **EMERGENCY RESPONSE LESSONS LEARNED**
   Panel Discussion:
   - Assessment of 2015 South Carolina Dam Failures Related to Offshore Hurricane Joaquin by the GEER Team
     - Hermann Fritz, Georgia Institute of Technology
   - Oroville Spillway Incident: A Unified Response
     - Assa Fessler, California DWR
   - Subcommittee on Sedimentation Dam Removal Analysis
     - Guidelines for Sediment Jennifer Bountry and Timothy Randle, Bureau of Reclamation
   - Large Dam Removals for Renewal of the Klamath River
     - Tom Hepler, Schnabel Engineering; Seth Gentzler and John Roadler, AECOM; Ben Swann, CDM Smith; Scott Wright, River Design Group; and Mark Branson, Klamath River Renewal Corporation
   - Balancing Risk, Cost, and Ecosystem Restoration in Dam Removal
     - Tyler Kreider, Kleinschmidt Associates
   - Epic Efforts to Restore a Unique Place on the Rocky River
     - Robert Indri and Aaron Collins, Schnabel Engineering; Angels Allen, Wildlands Engineering; and Chris Flowers, Unique Places, LLC
   - Understanding Sediment in Dam Removal
     - Brinton Swift, HDR Engineering

6B: H&H – Big Floods and Spillways
**Room: Tuttle**

Moderators: James Lindell, Stantec; and Yulia Zarkevskaya, SNC Lavalin

6C: Decommissioning
**Room: Flager**

Moderators: Jennifer Bountry, Bureau of Reclamation; and Kevin Schneider, Barnard Construction

6D: Asphalt Core Dams/Chimney Hollow
**Room: Miami Lecture Hall**

Moderators: Georgette Hepas, USACE; and Sam Abbasszadeh, Stantec

6E: Monitoring
**Room: Brickell**

Moderators: Shaun Dustin, Geocomp; and Kim deRubeis, Consultant

6F: Levees III
**Room: Orchid BCD**

Moderators: Scott Raschke, Schnabel Engineering; and Darren Mack, SAGE Engineers

- Learning from the Past: Historic Dam & Levee Failures and Near-Failures in Florida
  - Scott Burch, Gannett Fleming, Inc.
- Risk Analysis
  - Methodologies for Evaluating Urbanized Canals
    - Chris Ellis, Bureau of Reclamation
- Risk Informed Modification Study of Complex Levee Systems: Lower Wood River Case History
  - Jose Lopez, USACE
- Risk Analysis of Vegetation on Levees
  - Lawrence Roth, Arcadis
- Shallow Water Lidar System for Overtopping Breach Measurements
  - Ghada Ellithy, USACE
- Risk Assessment of I-Walls on Levees
  - Michael Sharp, Noah Vroman and Brad Arcement, USACE

Long Presentations (15-30 minutes)

Short Presentations (8-10 minutes)
Second City - Second Chances: Stories of Rehabilitation, Modification and Revitalization

The 39th USSD Annual Conference and Exhibition will take place in Chicago, April 8-12. The beautiful downtown Chicago Hilton will be the conference venue for all events.

Rachael Bisnett, Stantec, is the conference chair. Please contact Rachael or a technical committee chair if you are interested in participating on the planning committee.

Exhibition reservations are being accepted now. Visit the Exhibitors booth in the registration area for information.

The Call for Papers will be issued in early June. Plan now to submit an abstract.

Mark your calendars:
USSD 2020: Denver, April 20-24