BREAKING DOWN RISK:
Resiliency, Integration, Sustainability & Knowledge in a Climate of Extremes

FLOODPLAIN MANAGEMENT CONFERENCE
SEPT. 8-11, 2015 ~ Rancho Mirage, CA
In Conjunction with ASFPM Arid Regions Conference
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River/Floodplain Modeling and Mapping
Watershed Modeling and Mapping
Feasibility Studies and Alternatives Analyses
Flood Defense Facility Design and Certification
Stormwater Management and Drainage Master Planning
Flood Emergency Response Planning and Mapping

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Robert Bezek is an engineer in the Mitigation Division of FEMA’s RIX Office in Oakland, CA where he is primarily responsible for the management of the RiskMAP program throughout AZ and Southern CA. Prior to coming to FEMA in 2011 Bob worked as a Water Resources Manager for the State of Minnesota Department of Natural Resources and as a Zoning Administrator for St. Croix County in Wisconsin. He has Bachelor degrees in both Geology and Civil Engineering, and a Masters in Public Affairs.

Mark Wills, PE, CFM, Chief of Planning, Riverside County Flood Control and Water Conservation

Mark began his career with the District in 1990 in the Flood Plain Management Section and has subsequently worked in Environmental/Regulatory Services, Municipal Stormwater (NPDES), Administrative Services and Development Review. Mark currently manages a staff of eighteen engineers and other professionals engaged in Development Review, Plan Check, Drainage Master Planning, Project Development/Feasibility, Administrative Services and Federal Projects (USACE).

Mark is a graduate of Cal Poly San Luis Obispo and resides in Temecula, CA with his wife and two Labrador Retrievers. A native of California and a life-long fan of the ocean, Mark enjoys boating, fishing, kayaking and scuba diving and spending time with his granddaughter Lucy.

Introducing the new FMA Executive Director

Mary Seits earned her Bachelor of Arts degree from California State University Fullerton and her teaching credential from University of California, Irvine before becoming a teacher in the Irvine Unified School District. Her teaching career included teaching multiple subjects including science resource and gifted education. In addition to this, Mary was a mentor teacher, conference presenter, curriculum writer and after-school program coordinator. After her teaching career, she took some time off to raise her five children, during which time she continued as a substitute teacher, homeschool mom and church volunteer. Mary came to Floodplain Management Association in 2007 as Assistant to the Executive Director where she worked on membership service, event planning, newsletter preparation and web site maintenance. She currently resides in the San Diego area with her husband Mark.

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- Coastal/Estuarine Modeling
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OUR CLIENTS INCLUDE:
- US Army Corps of Engineers
- Federal Emergency Management Association (FEMA)
- National Flood Insurance Program Participating Communities
- California DWR

CONTACT: Martin Teal, P.E. P.H., D.WRE (858) 487-9378 or David Curtis, Ph.D. (916) 932-7402
ARID REGIONS CO-CHAIRS

This 2015 FMA Conference is in conjunction with ASFPM’s Arid West Regions Conference. The location in the desert provides an appropriate venue for this join discussion of “Breaking Down Risk: Resiliency, Integration, Sustainability & Knowledge in a Climate of Extremes.”

Jeanne Ruefer, CFM, is a Certified Floodplain Manager with 20 years of experience in floodplain management, water resource planning and project management. Ms. Ruefer is a former board member and chair of FMA. Currently, she is the Region 9 Director on the ASFPM board, and Co-Chair of the Arid Regions Policy Committee. Ms. Ruefer holds a B.S. in Geology from the University of California at Santa Cruz, and a M.S. in Hydrology & Hydrogeology from the University of Nevada-Reno.

Mark E. Forest, P.E., CFM, is the National Practice Leader for Floodplain Management and Modeling for HDR Engineering, Inc. and resides in Reno, Nevada. He has over 30 years of experience in hydrology, hydraulics and water resources engineering in both the public and private sectors. He is a registered professional engineer and Certified Floodplain Manager.

Mark also served on the Board of Directors of the Floodplain Management Association for approximately 10 years and is a past chair of that organization. He also currently serves on the ASFPM Foundation Board of Trustees.

Martin J. Teal, P.E., P.H., D. WRE, F. ASCE, is Vice President with WEST Consultants in San Diego, California. He has over twenty-five years experience in the areas of hydraulics, hydrology and sediment transport and has been involved with numerous river and floodplain studies. Mr. Teal is a registered Professional Engineer in California, Arizona, Nevada and Hawaii, a certified Professional Hydrologist a Diplomate of the American Academy of Water Resources Engineers and a Fellow of the American Society of Civil Engineers. He earned his B.S. in Civil Engineering from the University of California, Berkeley, and his M.S. in Civil Engineering (Hydraulics) from the University of Iowa.

Alex Yescas, PE, CFM, ENV SP, Atkins North America, Inc., San Diego, CA, Sr.

Alex has worked on complex engineering projects in Arid Regions for over a decade focusing on alluvial fan and riverine floodplains including assessment of levees that encompass FEMA flood studies. He assisted the Ca Department of Water Resources in developing state floodplain mapping plans and collaborating with FEMA to approve and fund Risk MAP elements, including development of a statewide GIS-based levee database that links to FEMA and USACE levee databases; implemented the Flood Risk Notification program to inform homeowners of residual risk associated with levees, benefits of participation in the CRS, and actions by individuals to become more flood resilient.

Alex is a former southern director of the Floodplain Management Association and has served on the following: Annual Conference Planning Committee, Luncheon Committee, and Professional Development Committee. He has presented at over 10 national and state conferences and workshops on topics including flood risk communication, floodplain management, and H&H methodology.

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Supervisor John J. Benoit represents the eastern two-thirds of Riverside County on the Board of Supervisors. Incorporating nearly 5,000 square miles, the 4th District stretches from Palm Springs and Desert Hot Springs, south to the Salton Sea and east to Blythe and the Colorado River.

John has a life story of exceptional service to the public. John is a veteran of 31 years in law enforcement, starting with the Corona Police Department. He attended the FBI National Academy and served as a volunteer fire captain with the Sunset-Whitney Fire Department. His 29 years with the California Highway Patrol took him up and down the state, working patrols in Los Angeles, in Sacramento and in Bakersfield. In 1988, he made the Coachella Valley his home when he was promoted to commander of the California Highway Patrol’s Indio Station.

Long active in community service organizations as past president of both the United Way of the Desert and Indio Rotary, John served on the Desert Sands School Board. Having retired from the Highway Patrol in 2001 and driven to make a positive impact and serve his community, he ran for the State Assembly in 2002. John served three full terms in the California State Assembly, representing the 64th District from 2002-08 and then representing the 37th District in the California State Senate in 2008-09.

As a state lawmaker, John was successful in having 40 pieces of legislation signed into law, including the landmark “Aryanna’s Law” to protect children in daycare centers. He was known for his ability to reach across the aisle to improve public safety, transportation and education. He was awarded Legislator of the Year honors by the California School Boards Association, the School Transportation Coalition, the California Narcotics Officers’ Association and the Chief Probation Officers of California.

Following the death of his friend and mentor, Supervisor Roy Wilson, John was appointed to the Board of Supervisors in 2009. He was elected to a full, four-year term on June 8, 2010.

A graduate of Riverside’s Notre Dame High School and Riverside City College, John holds a bachelor’s of science degree in public safety at Cal State Los Angeles and a master’s degree in public administration at Cal State San Bernardino. Having participated in language immersion programs in Mexico and Costa Rica, his bilingual skills are invaluable to his work in Riverside County’s largest and most diverse district.

John and his wife, Sheryl, married in 1978. They are committed parishioners of Saint Francis of Assisi Catholic Church. They have a daughter, Sarah, and son, Benjamin, and a beautiful granddaughter, Abrielle Benoit.

Brig. Gen. Mark Toy assumed command of the South Pacific Division (SPD), U.S. Army Corps of Engineers (USACE) on June 30, 2014. He was promoted to the rank of Brigadier General on August 15, 2014. Established in 1888, the Division is one of nine USACE regional commands. The region encompasses California, Nevada, Arizona, New Mexico, Utah, and parts of Colorado, Oregon, Wyoming, Idaho, and Texas. Four operating Districts are headquartered in Albuquerque, Los Angeles, Sacramento, and San Francisco.

As Division Commander, Brig. Gen. Toy is responsible for leading a professional workforce of more than 2,300 military and civilians. South Pacific Division manages a $1.5B military and civil works program. Key missions include defending and protecting our nation, responding to disasters, managing the nation’s water resource infrastructure for economic growth and environmental sustainability, and building USACE for the future.

From August 2013 to June 2014, Brig. Gen. Toy served as the Chief of Staff for the U.S. Army Corps of Engineers (USACE). There he was the key integrator for focusing the efforts of the HQ staff, nine Major Subordinate Commands/Divisions, 43 Engineer Districts, and two Centers and Laboratories to best accomplish the Commander’s Intent. He was the principal advisor to the Commanding General and the Deputy Commanding General.

Brig. Gen. Toy served as the Commander and District Engineer for the Los Angeles District from July 2010 to July 2013. He led 844 military and civilian personnel operating throughout a 226,000 square mile area of California, Arizona, Nevada, and Utah. He controlled in excess of $1 billion annually executing a program of planning, engineering, construction, asset management, regulatory, emergency management, and environmental services for three Army and eight Air Force installations, International and Interagency customers, and the nation’s civil water resources infrastructure in the Southwest. Brig. Gen. Toy maintained strong personal liaison with senior national civil works and military leaders, 54 members of Congress, 170 Native American tribes, 4 states and numerous local governments.

Brig. Gen. Toy commanded the 84th Engineer Battalion “Never Daunted” from July 2005 to June 2007 at Schofield Barracks, Hawaii. In December 2006, the battalion deployed for one year to Iraq for Operation Iraqi Freedom (OIF). As Battalion Commander, he led over 900 Soldiers, Sailors and Airmen in providing direct and general engineering support to Multi-National Corps Iraq in order to provide assured mobility and construction capability throughout Iraq. Upon redeployment, the 84th Engineer Battalion was awarded a Meritorious Unit Citation. For his service in the combat zone, Brig. Gen. Toy was awarded the Bronze Star Medal and the Combat Action Badge. Some of his other key staff assignments were: Chief, Engineer Branch, Officer Personnel Management Directorate, Human Resources Command, Alexandria, Virginia; Aide-de-Camp to LTG Robert B. Flowers, the 50th Chief of Engineers and Commanding General, U.S. Army Corps of Engineers, Washington D.C.; Secretary of the General Staff for the 25th
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Infantry Division (Light), Task Force Eagle, Multinational Division (North), Stabilization Force 11, Bosnia-Herzegovina; Assistant Professor of Environmental Engineering, Department of Geography and Environmental Engineering, United States Military Academy, West Point, New York; and Aide-de-Camp to MG Ernest J. Harrell, Commanding General, US Army Engineer Division Europe, USACE, Frankfurt, Germany. Brig. Gen. Toy is from Huntington Beach, California. He graduated from the United States Military Academy at West Point in 1987 with a Bachelor of Science Degree in Operations Research. He holds a Masters Degree in Business Administration from Boston University (1991), a Master of Science Degree in Environmental Engineering from the University of California at Los Angeles (1996), and a Master of Science Degree in National Resource Strategy from the Industrial College of the Armed Forces (2010). He is a Registered Professional Engineer in the states of Arizona and Virginia.

Ian Dinham was elected Chairman of Australia’s Floodplain Management Association (FMA) in 2011. In 2015 the FMA became Floodplain Management Australia which better reflects the growing national role of the organisation, and Ian took on the new title of President.

Ian is also currently the Director of Engineering at Moree Plains Shire Council which is located in New South Wales just south of the Queensland border.

Ian served for nine years as the technical representative on the FMA Executive Committee, and has presented papers to various forums and conferences in Australia and the United States involving floodplain management, engineering service delivery, river management, natural resource management and emergency management.

Ian’s career includes senior management roles as Director and General Manager in local government, and he is also a twice-elected Councillor in the Clarence Valley of New South Wales. Ian holds a Civil Engineering Degree from the University of New South Wales, a Business Management Certificate and Local Government Engineers Certificate.

2015 Floodplain Management Association Awards

Communication and Outreach Award
Santa Clara Valley Water District
San Jose, CA

Award for Excellence
Leo Kreymborg, PE, CFM
Senior Engineer
Water Resources West
Atkins North America, Inc.
San Diego, CA

Award for Excellence
Central Valley Floodplain Evaluation and Delineation Program
FloodSAFE California
CA Department of Water Resources
Sacramento, CA

Karl Mohr Distinguished Service Award for National Activities
David T. Williams, PhD, PE, PH, CFM, CPESC, FASCE, FEWRI, D.WRE
President
DTW & Associates, Engineering, LLC
Ft. Collins, CO

Andy Lee Award for Extraordinary Public Service for State Activities
Jeremy Lancaster, PG, CEG
Engineering Geologist
California Geological Survey
CA Department of Land Conservation
Sacramento, CA

Andy Lee Award for Extraordinary Public Service for State Activities:
Rick Wilson, PG, CEG
Senior Engineering Geologist
California Geological Survey
CA Department of Land Conservation
Sacramento, CA

Mentorship Award
Richard (Dick) French, PhD (in memory)
AAWRE founding Diplomate
ASCE EWRI

Floodplain Manager of the Year
Frank DeMarco, PE, CFM (retired)
County of Hawaii
Department of Public Works
Engineering Division
Hilo, HI

Chair’s Recognition Award
Judy Soutiere, PMP, CFM
Chief, Civil Works Project Management, Section B, Sacramento District
2015 Conference Committee

Robert Bezek - FEMA Region IX
Gregor Blackburn - Federal Emergency Management Services
George Booth - County of Sacramento Department of Water Resources
Dennis Bowling - Rick Engineering Company
Dan Charlton - Coachella Valley Water District
Eric Clyde - MWH Americas, Inc.
Mark Forest - HDR Engineering, Inc.
Vince Geronimo - AECOM
Darryl Hatheway - AECOM
Pal Hegedus - Kimley-Horn and Associates
Phyllis Helt - Retired
Cameron Jenkins - WEST Consultants
Maria Lorenzo Lee - California Department of Water Resources
Salomon Miranda - California Department of Water Resources
John Moynier - Stantec
Ricardo Pineda - California Department of Water Resources
Thomas Plummer - Civil Engineering Solutions, Inc.
John Powderly - City of West Sacramento
Om Prakash - WEST Consultants, Inc.
Brian Rowley - Atkins North America, Inc.
Jeanne Ruefer - Tetra Tech, Inc.

Mark Seits - HDR Engineering, Inc.
Eric Simmons - Federal Emergency Management Services
Martin Teal - WEST Consultants, Inc.
Brian Trushinski - Ventura County Watershed Protection District
Carol Tyau-Baum - Hawaii Dept. Land & Natural Res.
Carl Walker - City of Roseville
Lawrence Walsh - US Army Corps of Engineers
Mark Wills - Riverside County Flood and Water Conservation District
Alex Yescas - Atkins North America, Inc.

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Mike Anderson, CFM
Principal
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PROGRAM AT A GLANCE

Tuesday, September 8, 2015

7:30am - 5:00pm
Registration – Celebrity Ballroom Foyer

7:30am - 8:25am
Continental Breakfast – Celebrity Ballroom Foyer

CONCURRENT WORKSHOPS AND SYMPOSIUM
8:30am - 5:30pm

8:30am - 12:30pm
Two-Dimensional Flood Modeling using RiverFlow2D with SMS – Ambassador 6
Risk and Uncertainty Principles for Flood Control Projects – Celebrity H

9:00am - 12:00pm
Community Rating System One-on-One Appointments – Polo Room

10:30am - 5:30pm
• Arid Regions and FMA Joint Alluvial Fan Symposium – Rancho Mirage
• California Department of Water Resources Certified Floodplain Managers (CFM) Examination Review Workshop – Ambassador 5
• Office Hours with FEMA – Mission Hills Board Room

1:30pm - 3:30pm
FEMA Flood Hazard Mapping Group – Celebrity F
National Flood Insurance Program – Celebrity G

1:30pm - 4:30pm
Community Rating System Workshop – Oasis 4

3:00pm - 4:30pm
DWR Meet and Greet – Ambassador 4

1:30pm - 5:30pm
• FLO-2D Integrated Flood Simulation and Storm Drain Modeling - Oasis 1, 2, 3
• How to Develop and Execute a 2D and 1D/2D TUFLOW Model – Oasis 5, 6, 7
• Bridge, Bridge Scour and Hydraulics Using HEC-RAS – Ambassador 7

5:30pm - 7:30pm
Opening Reception!
Exhibit Hall – Celebrity Ballroom ABCDE

A Scientific Approach to Managing Alluvial Fan RISK
A Joint Arid Regions Committee & FMA Symposium

10:00 - 10:10
Introductory Remarks and description of Symposium Activities
FMA: Thomas Plummer P.E., CFM ARC: Marty Teal P.E., P.H., D.WRE

10:10 - 10:30
Continuing the Legacy of Dr. Richard French’s Work - Inaugural FMA Mentorship Award.
Julianne Miller, Desert Research Institute

10:30 - 12:30
BASIC FAN SCIENCE - What is a fan, classification, fan flood processes, fan formation, similar landforms, soils, geographic variations, impacts of underlying geology, climate
FLOODING ON FANS - Water & debris floods, avulsions, mapping of historical fan floods, surficial geomorphic mapping & hazard classification
Phil Pearthree Ph.D - Arizona Geological Survey
FLOODING AND DEBRIS FLOWS ON CALIFORNIA FANS - California alluvial fans: regional differences, surficial geologic mapping and debris flow assessment
Jeremy Lancaster CEG – California Geological Survey
FLOODING AND DEBRIS FLOWS ON ARIZONA/NEVADA FANS

12:30 - 1:30
Lunch Break
On your own

1:30 - 2:00
ALLUVIAL FAN FLOODING AND SEMI- and ARID LAND HYDROLOGY - active vs inactive alluvial fan mapping, geomorphic surfaces and soil parameters, debris flows, wildfire affects, sheet flooding
Julianne Miller, Desert Research Institute

2:00 - 2:45
CURRENT RESEARCH AND GAPS - surficial data, modeling tools, urban vs. natural systems, fan classification by process, flow attenuation
Jon Fuller P.E., R.G., P.H., D.WRE, CFM, M.S - JE Fuller

2:45 - 3:00
Break

3:00 - 3:30
DEFINING RISK ON ALLUVIAL FANS - Characterizing fan flood hazards, vulnerability and risk. Integrating hazard mapping, damage assessment and managing risk.
Jimmy S. O’Brien - Ph.D., P.E. - FLO-2D

3:30 - 5:20
PANEL - HOW DOES THE SCIENCE PRESENTED TODAY INFORM OUR RISK ASSESSMENT? - Question and Answer Discussion
Facilitated by Robert Bezek, FEMA Region IX Panelists: Above Speakers and Participants

5:20 - 5:30
Closing Remarks
Thomas Plummer P.E., CFM on behalf of FMA and Arid Regions Committee of ASFPM
Wednesday, September 9, 2015

7:30 - 5:00pm
Registration - Celebrity Ballroom Foyer

7:30 - 8:25pm
Continental Breakfast - Celebrity Ballroom ABCDE

8:30am - 10:20am
Plenary Session
"Introduction to R.I.S.K."
Ambassador 1, 2, 3, 4

Welcome from the Floodplain Management Association Chair: Thomas Plummer, P.E. CFM, President, Civil Engineering Solutions, Inc.
Welcome Remarks: 4th District Supervisor John Benoit, Riverside County Board of Supervisors
Introduction of the Conference Chairs: Mary Seits, Executive Director
Plenary Keynote: Brigadier General R. Mark Toy, Commander, USACE South Pacific Division

10:20am - 10:45am
Break

10:45am - 12:05pm
CONCURRENT SESSIONS, WORKSHOPS AND SYMPOSIUM
Panels:
Plenary II – Introduction to R.I.S.K.- Resiliency, Integration, Sustainability and Knowledge in a Climate of Extremes – Rancho Mirage
Arid Regions: Unique Risks in the Arid West – Oasis 4
CRS One-on-One Appointments – Mission Hills Board Room

12:15pm - 2:15pm
AWARDS LUNCHEON and KEYNOTE SPEECH
Location: Ambassador 1, 2, 3, 4
Keynote Speaker: Ian Dinham, Chairman, Floodplain Management Australia

2:30pm - 3:50pm
CONCURRENT SESSIONS
DWR Meet and Greet - Celebrity G
Panels:
• R.I.S.K.: Resiliency, Integration, Sustainability, Knowledge – Rancho Mirage
• SFMP – Developing a Flood Management Investment Strategy: An Interactive Presentation and Discussion – Oasis 1, 2, 3
• ASFPFM’s National Flood Programs and Policies in Review (2015) and the Riverine Erosion Hazard Discussion Paper – Oasis 4
• Planning for Sea Level Rise and Coastal & Riverine Flooding – Ambassador 7

CONCURRENT SESSIONS
2:30pm - 3:50pm
Workshops:
• Advanced CRS Requirements: In-Depth Presentation on the CRS Program Requirements – Ambassador 1, 2, 3

Technical Sessions:
• From Drought to Flood – Oasis 5, 6, 7
• Regional Flood Modeling for Master Planning and Mitigation – Celebrity H
• FEMA Validation and Map Products – Celebrity G
• GIS – Mapping a Flood of Data for Public Awareness – Celebrity F

Break
3:50pm - 4:00pm

4:00pm - 5:30pm
CONCURRENT SESSIONS
Panels:
• Joint Panel on Alluvial Fans: Mapping a Moving Target – Oasis 4
• General Plans, Zoning Ordinances, and the Central Valley Flood Protection Plan – HELP! – Ambassador 5
• Coastal Flood Mapping – Flood Management at Outfalls and River Mouth: Today and into the Future – Celebrity G

Technical Sessions:
• CRS – Tips on Maximizing Credits and Getting It Done – Oasis 1, 2, 3
• Arid Flood Management – Oasis 5, 6, 7
• Levees – Evaluation and Remediation Case Studies – Ambassador 6
• Multi-Benefit Projects – Flood, Water and the Environment – Ambassador 7

5:30pm - 7:30pm
Grand Reception and Networking

Thursday, September 10, 2015

7:30am - 5:00pm
Registration – Celebrity Ballroom Foyer

7:30am - 8:00am
Continental Breakfast – Celebrity Ballroom ABCDE

8:00am - 9:00am
Meet the FMA Board of Directors and the Executive Director – Rancho Mirage

9:00am - 10:30am
CONCURRENT SESSIONS
Panels:
• Central Valley Regional Flood Management Program Overview – Rancho Mirage
• To Multi Benefit and Beyond: Planning and Implementing for Sustainable Outcomes – Ambassador 5
• 2D Modeling – 2D or Not 2D – Celebrity H
CONCURRENT SESSIONS

Panels:
- Drought to Flood: Impacts of Extreme Weather Conditions – Ambassador 4
- Arid Regions Extreme Hydrology: Raining Hard & Heavy – Really? – Oasis 4

Workshop:
- Flood Control and Cultural Resources: Legal and Regulatory Considerations – Rancho Mirage

Technical Sessions:
- Funding Projects – Oasis 1, 2, 3
- GIS Methods for Arid Issues – Oasis 5, 6, 7
- Shining a Light on FEMA’s LAMP, The NFIP and ESA Compliance – Ambassador 5
- Flood Forecasting, Operations and Planning – Ambassador 7
- Levees – Standards and Certifications – Ambassador 6
- 2D Modeling in Practice 2 (Case Studies) – Celebrity H
- Special Hydrologic Techniques – Celebrity F

6:00pm-8:00pm
Reception and Tour of the Palm Springs Air Museum

Friday, September 11, 2015

8:00am - 8:55am
Continental Breakfast – Celebrity Ballroom Foyer

8:30am - 12:00pm
CFM Exam, *Advance (3 weeks) registration with ASFPM required at www.floods.org – Oasis 1

9:00am - 12:30pm
CONCURRENT SESSIONS and FIELD TRIPS

Panels:
- California Silver Jackets Team Meeting – Rancho Mirage
- FMA’s Introduction to HEC-RAS 5.0 – Ambassador 4

Technical Sessions:
- What If? Emergency Action Plans – Oasis 1, 2, 3
- Multi-Dimensional Modeling – Oasis 5, 6, 7
- Levees – Central Valley Methods – Ambassador 6
- Multi-Benefit Projects – Flood, Sediment and Restoration – Ambassador 7
- 2D Modeling – Comparing The Alternatives – Celebrity H

12:30pm - 2:00pm
Lunch and Networking in the Exhibit Hall – Celebrity Ballroom ABCDE

1:00pm - 2:00pm
FMA Coastal Committee
Mission Hills Boardroom

2:00pm - 3:30pm
CONCURRENT SESSIONS

Panels:
- DWR Central Valley Flood Protection Plan – Rancho Mirage
- Increasing Opportunities through Intergovernmental Collaboration – Oasis 1, 2, 3

Technical Sessions:
- Risk Awareness – Oasis 4
- LID Benefits in Floods – Oasis 5, 6, 7
- How Did We Do? Results from the USACE Periodic Inspections in CA – Ambassador 6
- 2D Modeling in Practice 1 (Case Studies) – Celebrity H
- Flooding Aspects of Alluvial Fans – Celebrity G
- Riverine Modeling – Celebrity F

3:30pm - 4:00pm
Break

4:00pm - 5:30pm
DETAILED CONFERENCE PROGRAM

Tuesday, September 8, 2015

7:30am - 5:00pm  
Registration  
Celebrity Ballroom Foyer

7:30am - 8:25pm  
Continental Breakfast  
Celebrity Ballroom Foyer

CONCURRENT WORKSHOPS & SYMPOSIUM

8:30am - 12:30pm  
Two-Dimensional Flood Modeling Using RiverFlow2D with Surface-Water Modeling Systems  
Ambassador 6

Two-Dimensional tools you need to get up to speed in two-dimensional hydraulic modeling quickly and effectively. Take advantage of a unique hands-on experience to learn how to set up a comp2D flooding application using RiverFlow2D model and Aquaveo SMS. The workshop will showcase advances on 2D modeling tools for floodplain analysis using RiverFlow2D and SMS. A hands-on exercise will allow participants to learn the main steps required for practical 2D flooding modeling and will include review of model results to assist participants in correcting potential errors.

Instructors: Reinaldo Garcia, Hydronia and Cameron Jenkins, WEST Consultants

8:30am - 12:30pm  
Risk and Uncertainty Principles for Flood Control Projects  
Celebrity H

In the 1990’s, the U.S. Army Corps of Engineers, the primary custodians of the U.S. river systems, decided that future flood control projects would be designed based upon Risk and Uncertainty principles (R&U). Although R&U had been utilized in other industries, this was the first time it was to be applied to water resources projects on such a grand scale. This short course will present the concept of uncertainty (both in nature and in the tools that are used by water resources engineers), principles of R&U in an easily understandable manner and how they are applied to flood control design. It will explore risk, uncertainty, and probabilistic approaches for hydrologic sciences and engineering. In addition, the course will present the sources of information for determining the important parameters for R&U analysis as well as how to apply this information. An example levee project is presented to show how all the pieces fall together to conduct a water resources study.

Instructors: David Williams, PhD, PE, CFM, David T. Williams & Associates Justin Griffiths, NV5

9:00am - 12:00pm  
CRS One-on-One Appointments  
Polo Room

Appointments can be scheduled for any time from 9:00 a.m. to 12:00 p.m. Tuesday, September 8 and 10:00 a.m. to 12:00 p.m. on Wednesday, September 9. To ensure your first choice of available times, please contact Dave Arkens at (702) 354-4674. Meetings will be held in the Polo Room (Tuesday) and the MH Board Room (Wednesday) of the Conference Center. Discussion topics could include your community’s land use management program, higher regulatory standards, stormwater management program, flood warning system, watershed management program, or any other components of a balanced floodplain management program. This will help you find out what is needed for your community to either join the CRS or to improve its current CRS class rating.

CONCURRENT WORKSHOPS AND SYMPOSIUM

10:30am - 5:30pm  
Arid Regions and FMA Joint Alluvial Fan Symposium  
Rancho Mirage

Arid Regions and FMA Joint Alluvial Fan Symposium

• How can we apply current research?
• How does the science presented today inform our RISK Assessment?
• What tools do we wish we had? Information gaps?
• What are the biggest challenges for fan hazard assessment?
• What regional differences and similarities exist between fans in different geographic areas within FMA’s home territory?
• What about the NFIP? What do we need from FEMA? How might we move for Local, Regional, State and National Best Practices?
• What are some next steps WE (FMA, AR, ASFPM) could be doing?
CA Dept. of Water Resources Certified Floodplain Managers (CFM) Examination Review Workshop
CA Dept. of Water Resources Certified Floodplain Managers (CFM) Examination Review Workshop This full day workshop reviews material for the CFM Examination, a patented certification by the Association of State Floodplain Managers (ASFPM) focused primarily on FEMA’s National Flood Insurance Program. (If you are not a full conference attendee, and would like to attend this workshop, the one-day FMA conference fee is required.)
Instructors: Ray Lee, North Central Region NFIP Floodplain Management Specialist, CA Dept. of Water Resources and Salomon Miranda, PE, MS, Southern Region CA Dept. of Water Resources

Office Hours with FEMA
Come meet with FEMA Region IX in an informal setting. Must schedule an appointment. Please contact Ed Curtis at 510-627-7270/ edward.curtis@fema.dhs.gov or Eric Simmons at 510-627-7029/ eric.simmons@fema.dhs.gov.

FEMA Flood Hazard Mapping Group
FEMA recently introduced advanced tools significantly automating the reviewing of Letters of Map Change. These tools allow floodplain managers, communities, and individual homeowners to submit online applications to FEMA. New applicants (regardless of the type of LOMC request) can upload all of the information and supporting documentation, make fee payments, and check the status of their application online. This workshop covers the new process and latest changes in the FEMA Flood Hazard Mapping Group.
Instructors: Alex Haptemariam, Stantec

National Flood Insurance Program
Sweeping reforms have been introduced to the National Flood Insurance Program over the past few years. This has left a great deal of confusion in its wake, specifically as it relates to the factors used to rate an NFIP policy. As Floodplain Managers, it is important for you to understand the factors that determine the premium of an NFIP policy along with recognizing the impact that even minor building modifications may have on a property owners’ flood insurance policy. This presentation will focus on several aspects of the NFIP rating, including:
• The elimination of pre-FIRM subsidized rates.
• The types and benefits of grandfathering.
• The most common improvements that raise a property owners’ premium, along with alternative recommendations.
• The impact of hanging floors, elevators, additions and extensions.
• Instances in which simple building modifications may result in a lower NFIP premium.

Understanding the risk rating factors used by the NFIP will provide you with valuable insights that you can share with property owners’ as they seek your guidance and approval for building construction and modification.
Presenters: Phillip Dunn, ANFI, National Flood Services and Amy Itschner, PIAM, ANFI, National Flood Services

Community Rating System Workshop - Introduction to the Community Rating System: For Communities Interested in Joining the Community Rating System
Moderator: Brian Trushinski, County of Ventura
This workshop will cover the requirements to join the Community Rating System (CRS) Program, an overview of the prerequisites and documentation requirements for most of the CRS activities most commonly receiving credit when a community joins the program, and the CRS points that a community can work towards to achieve a CRS Rating. The main focus of this workshop will be an overview of the 2013 CRS Coordinator’s Manual which is now in effect. The CRS provides annual flood insurance premium discounts in those communities that implement floodplain management activities above and beyond the minimum requirements of the National Flood Insurance Program (NFIP). The CRS has been proven to help motivate elected officials and residents to support flood protection programs. To date 89 of California’s 526 NFIP communities have joined the CRS. California CRS communities are saving their residential and business property owners more than $14 million each year.
Instructor: Dave Arkens, CFM, ISO/CRS Specialist, ISO Community Hazard Mitigation}
CONCURRENT WORKSHOPS AND SYMPOSIUM

3:00pm - 4:30pm
Ambassador 4

DWR Meet and Greet
Please join California Department of Water Resources staff in an informal setting anytime during this Meet and Greet session.

1:30pm - 5:30pm
Oasis 1, 2, 3

FLO-2D Integrated Flood Simulation and Storm Drain Modeling
A four-hour workshop that will focus on urban storm drain modeling with the FLO-2D Pro model. Urban details as buildings, walls, street flow, drainage channels, and storm drain infrastructure add complexity to the flood models. To address such flood hazard impacts for an urban area with a storm drain system requires an integrated approach with both storm drain inlet control and pipe system capacity. No other combined 2-D flood routing and storm drain models predict storm drain inlet control and outfall control based on water surface elevation and inlet/outlet geometry. A special workshop focus will be placed on steep urban areas with storm drains including alluvial fans.

Instructors: Jimmy O’Brien, Noemi Gonzalez-Ramirez, FLO-2D Software, Inc.

1:30pm - 5:30pm
Oasis 5, 6, 7

How to Develop and Execute a 2D and 1D/2D TUFLOW Model
This workshop is an educational session focusing on teaching new users the correct techniques how to develop and execute 2D and 1D/2D TUFLOW models. Attendees will leave the session with detailed user notes and working TUFLOW models that can be rerun at a later date without the need for a software license.

Instructor: Chris Huxley, Wood Rodgers, Inc.

1:30pm - 5:30pm
Ambassador 7

Bridge, Bridge Scour and Hydraulics Using HEC-RAS
This workshop will provide attendees with practical hands-on experience using HEC-RAS for bridge hydraulics, scour calculations and culvert modeling. The content will be ideal for federal, state and local officials who may be required to perform or review hydraulic modeling for transportation, floodplain or development studies. The instructors will use a hands-on modeling approach to learning HEC-RAS, supplemented with technical overviews of the underlying methodologies within HEC-RAS to provide attendees with the understanding and ability to utilize HEC-RAS. Digital model files and documentation for the class will be provided at the start of the class. Attendees should bring their own laptop to the workshop pre-installed with the latest version of HEC-RAS which can be downloaded from: http://www.hec.usace.army.mil/software/hecras/downloads.aspx.

Instructor: Ted Cassidy and David Williams, David T. Williams and Associates; Sam Crampton, Dewberry

5:30pm - 7:30pm
Celebrity Ballroom ABCDE

Opening Reception!
Wednesday, September 9, 2015

7:30am - 5:00pm
Registration
Celebrity Ballroom Foyer

7:30am - 8:25am
Continentl Breakfast
Celebrity Ballroom ABCDE

8:30am -10:20am
Ambassador 1,2,3,4

10:20am -10:45am
Break

10:45am -12:05pm
CONCURRENT SESSIONS WORKSHOPS AND SYMPOSIUM

10:45am -12:05pm
Plenary “Introduction to R.I.S.K.”

Welcome from the Floodplain Management Association Chair: Thomas Plummer, P.E.
CFM, President, Civil Engineering Solutions, Inc.

Welcome Remarks: 4th District Supervisor John Benoit, Riverside County Board of Supervisors

Introduction of the Conference Chairs: Mary Seits, Executive Director

Plenary Keynote: Brig. Gen. Mark Toy, Commander, USACE - South Pacific Division

10:45am -12:15pm
CONCURRENT SESSIONS WORKSHOPS AND SYMPOSIUM

10:45am -12:05pm
Plenary II – Introduction to R.I.S.K.

Each of the Panelists will reflect on how Katrina has changed Risk Assessment and Floodplain Management for their agency and practice. The facilitator will guide the panelist through a series of questions about the recent evolution of Flood Risk Assessments, considering the “Climate of Extremes” (Drought/Flood). The theme of the conference will be reintroduced to the panelists “Breaking Down RISK - Resiliency, Integration, Sustainability and Knowledge, in a climate of Extremes” and a discussion of how these elements can be incorporated into improved floodplain management principles and flood RISK reduction.

Stu Townsley, Acting Chief of Operations and Regulatory, USACE - South Pacific Division
Juliette Hayes, Risk Analysis Branch Chief, FEMA Region IX
Susan Gilson, Executive Director of National Association of Flood and Stormwater Management Agencies.
Gary Bardini, Deputy Director, Integrated Water Management, California Department of Water Resources
Mark Wills, Riverside County Flood Control and Water Conservation District

Moderator: Dusty Williams, Riverside County Flood Control and Water Conservation District

10:45am -12:15pm
Arid Regions: Unique Risks in the Arid Region

Moderator: Mark Forest, HDR Engineering, Inc.

This panel of experts will discuss the unique hazards associated with arid regions, the technical limitations of the hydrologic and hydraulic analyses used to define the hazards, and potential solutions to meet these challenges and achieve sustainable floodplain management.

Phillip J. Shaller, PhD, PG, Senior Managing Scientist, Exponent, Inc.
Julianne Miller, Desert Research Institute
Shannon Summers, Mohave County Flood Control District

10:45am -12:15pm
CRS One-on-One Appointments

Appointments can be scheduled for any time from 9:00 a.m. to 12:00 p.m. Tuesday, September 8 and 10:00 a.m. to 12:00 p.m. Wednesday, September 9. To ensure your first choice of available times, please contact Dave Arkens at (702) 354-4674. Meetings will be held in the Polo Room (Tuesday) and the MH Board Room (Wednesday) of the Conference Center. Discussion topics could include your community’s land use management program, higher regulatory standards, stormwater management program, flood warning system, watershed management program, or any other components of a balanced floodplain management program.

This will help you find out what is needed for your community to either join the CRS or to improve its current CRS class rating.
12:15pm - 2:15pm
Ambassador 1,2,3,4

AWARDS LUNCHEON and KEYNOTE SPEECH
Keynote Speaker: Ian Dinham, Chairman, Floodplain Management, Australia - “Floodplain Management Aussie Style”

2:30pm - 3:50pm
CONCURRENT SESSIONS

2:30pm - 3:50pm
Rancho Mirage

Panel: R.I.S.K.: Resiliency, Integration, Sustainability, Knowledge
Moderator: Rachael Orellana, Flood Risk Program Manager, U.S. Army Corps of Engineers
This is an interactive discussion between the panelists and the audience regarding the inclusion of Resiliency, Integration, Sustainability and Knowledge to enhance floodplain management practices by local agencies.

Resiliency: Bonifacio Bigornia, US Army Corps of Engineers
Integration: Michael Mierzwa, CA Department of Water Resources
Sustainability: Betty Andrews, ESA
Knowledge: Sarah Owen, FEMA

2:30pm - 3:50pm
Oasis 1,2,3

Panel: SFMP – Developing a Flood Management Investment Strategy: An Interactive Presentation and Discussion
Moderator: Terri Wegener, CA Department of Water Resources
This interactive session will introduce key elements of the Department of Water Resources’ Statewide Flood Management Investment Strategy. The session will include key research findings from discussions with local agencies with flood management responsibilities statewide, a presentation on DWR’s long-term, outcome-based approaches to flood and overall water management, and a preview of policy recommendations to better determine if the outcomes of the State’s flood management goals have been realized. Throughout the presentation audience members will be asked to participate in interactive polls to better understand and explore how DWR is developing its Flood Investment Strategy.

Terri Wegener, CA Department of Water Resources
Jason Sidley, CA Department of Water Resources
Robyn Suddeth, CH2M Hill

2:30pm - 3:50pm
Oasis 4

Panel: National and Western Flood Policy - From General to Specific
Moderator: John Powderly, City of West Sacramento
Presentations on flood and mapping policy from a national and regional perspective, including a glimpse into the ASFPM’s National Flood Programs and Policies in Review (2015), insights from the Technical Mapping Advisory Council, and roll out of the Riverine Erosion Zone Discussion Paper.

Chad Berginnis, Executive Director, ASFPM
Tom Walker and Jon Fuller, Riverine Erosion Hazard Discussion Paper, ASFPM Committee
Scott Shapiro, Downey Brand
Scott Edelman, AECOM Vice-Chair of the Technical Mapping Advisory Council

2:30pm - 3:50pm
Ambassador 7

Panel: Planning for Sea Level Rise and Coastal and Riverine Flooding
Moderator: Mary Small, Coastal Conservancy
Wise planning can reduce flood damages and increase community resiliency. However, as we look ahead, what is wise planning? Climate models indicate sea levels will be rising, and both coastal and inland storms are predicted to become more severe, bringing increased risk of flooding. Wise planning requires emergency response and hazard mitigation be integrated with land use and infrastructure plans. This planning is complicated because of the local, state, and federal policies and regulations that govern it. This session will provide an overview of existing planning standards; clarify the differences between mandatory policies and recommended guidance; and describe both funding sources and financial incentives to aid your planning efforts.

Sahar Shirazi, General Plan Guidelines Manager, CA OPR
Juliette Hayes, Risk Analysis Branch Chief, FEMA Region IX
Dana Carey, Emergency Preparedness Supervisor, Yolo County
Lauma Willis (Jurkevics), CA Department of Water Resources
CONCURRENT SESSIONS

2:30pm - 5:30pm
Ambassador 1, 2, 3

Workshop: Advanced CRS Requirements: In-Depth Presentation on the CRS Program Requirements

This workshop will cover in greater detail the 2013 CRS Coordinator’s Manual. More specifically the main CRS Activities that CRS Communities typically apply for. Attendees are encouraged to ask technical questions pertaining to the Activities, share their experiences and ideas on implementing CRS Activities, and suggest how the Program might be improved to encourage greater participation in California, Hawaii, and Nevada.

Instructor: Dave Arkens, CFM, ISO/CRS Specialist, ISO Community Hazard Mitigation
Moderator: Brian Trushinski, County of Ventura

2:30pm - 3:50pm
Oasis 5, 6, 7

Technical Sessions: From Drought to Flood
Session Chair: Jeffery Crump, Michael Baker International

- Colorado’s Departments of Transportation and Natural Resources – New Partners in Stream Restoration and Floodplain Management: Kevin Houck, PE, CFM, Chief, Watershed and Flood Protection Section, State of Colorado; Steven D. Humphrey, PE, LEED AP, Project Manager, Muller Engineering Company, Inc.
- How the Current Drought is Increasing Future Flooding: Harvey Oslick, PE, CFM, Wood Rodgers, Inc.

2:30pm - 3:50pm
Celebrity H

Regional Flood Modeling for Master Planning and Mitigation
Session Chair: Dragoslav Stefanovic, PhD, PE, DWRE, Tetra Tech, Inc.

- Alamo Dam Simulated Breach Impact on Colorado River Flooding – Storage vs. 2D Areas: Cameron Jenkins, PE, WEST Consultants, Inc.
- Quantifying Attenuation Effects of Reservoirs and Flood Basins – A Case Study: Jack Xu, PE, CFM, Santa Clara Valley Water District

2:30pm - 3:50pm
Celebrity G

FEMA Validation and Map Products
Session Chair: David C. Curtis, PhD, WEST Consultants, Inc.

- Detailed and Approximate Flood Hazard Validation for FEMA Regions I, V, VII and X: Selena Forman, PhD, PE; Leo Kreymborg, PE, CFM; Ann Bechtel, PE, CFM, Atkins North America, Inc.
- Coastal Risk Map Products: James Johnston, GISP, CFM, Baker AECOM
- Exploring an Automated Mapping Methodology for Coastal Runup Zones: Kristen MacDougall, CFM and Elena Drei-Horgan, PhD, CFM, AECOM

2:30pm - 3:50pm
Celebrity F

GIS – Mapping a Flood of Data for Public Awareness
Session Chair: Rebecca Money, PE, GE, CFM, Kleinfelder

- GIS-Based, Dynamic 2D Flood Scenario Mapping Tool (Web-Based) for Flood Response Planning and Exercises: Greg Fabun and John Powderly, AICP, CFM, City of West Sacramento; Don Jones PE and Ben Brezing, EIT, AECOM
- Sharing Complex Model Data with the World: Nathanael Vaughan, PE, and Rob Lyons, PE, JE Fuller Hydrology & Geomorphology; Tom Loomis, PE, Pedro Melo-Rodriguez, Valerie Swick, PE and Gabriella Bota, Flood Control District of Maricopa County; Jim O’Brien, PE, FLO-2D Software
- Drone (UVA)Technology for Floodplain and Watershed Management Applications: Bruce M. Phillips, PACE

3:50pm - 4:00pm
Break
CONCURRENT SESSIONS

4:00pm - 5:30pm  Rancho Mirage
Moderator: Jeanne Ruefer, Tetra Tech, Inc.
A lively discussion regarding why this EO is so important to floodplain management, What the EO is expected to accomplish, and How it will be implemented by the Federal Agencies affected will be presented by our panelists who have been involved in its creation, support, review and comment.
Chad Berginnis, Executive Director ASFPM
Scott Shapiro, Downey Brand
Mike Mierzwa, CA Department of Water Resources

4:00pm - 5:30pm  Celebrity G
Panel: Coastal Flood Mapping – Flood Management at Outfalls and River Mouth: Today and into the Future
Moderator: Edward Curtis, P.E., CFM, Senior Engineer, FEMA Region IX, CCAMP Study Manager
In California there are hundreds of rivers, creeks and streams, as well as manmade outfalls and flood control channels that drain to tidally influenced estuaries or directly to the open Pacific coast. These areas represent valuable complex environments where riparian, estuarine, and lagoon habitat or residential & commercial property and infrastructure are at risk of impact due to coastal or terrestrial flooding and geomorphic change. Rising seas will accelerate morphologic change at the interface and make it increasingly difficult for interior areas to drain passively without increasing flood risk during combined extreme events. As communities respond to new regulatory data and investigate future conditions it is important for floodplain managers to understand the potential for increased flood risks to these heavily populated areas and fragile ecosystems. This session will explore on-going federal, state, and local government efforts to study, manage, and adapt to potential flood related impacts at these dynamic interfaces.
Scott Dusterhoff, Lead Geomorphologist, San Francisco Estuary Institute – Flood Control 2.0
Mary Small, Deputy Director, Coastal Conservancy, State Coastal Conservancy – Climate Ready Grant Program
Patrick S. O’Brien, MS, PE, Research Environmental Engineer USACE
Local Community Floodplain Manager, TBD

4:00pm - 5:30pm  Oasis 4
Joint Panel on Alluvial Fans: Mapping a Moving Target
Moderator: Robert Bezek, FEMA Region IX Engineer
The panelists will discuss the alluvial fan predictability in Arid Regions. The specifics will involve discussions on case examples and approaches taken to determine the potential flood risks associated with Alluvial Fans.
Jeremy Lancaster, California Geological Survey
Julianne Miller, Desert Research Institute
Stuart McKibbin, Riverside County Flood Control District and Water Conservation District
Jon Fuller, JE Fuller
Phil Shaller, PhD, Exponent

4:00pm - 5:30pm  Ambassador 5
Panel: General Plans, Zoning Ordinances, and the Central Valley Flood Protection Plan – HELP!
Moderator: John Powderly, City of West Sacramento
Have you amended your General Plan yet? California Government Code Section 65302.9 requires that Cities and Counties in the Sacramento-San Joaquin Valley amend their General Plan to be consistent with the Central Valley Flood Protection Plan no later than July 2, 2015. Are you developing your Zoning Ordinance amendment? CA GC Section 65860.1 requires that Zoning Ordinances be amended not more than 12 months after the General Plan is updated. This panel will provide information on how to comply with the law, and examples of how other communities have complied.
Sahar Shirazi, General Plan Guidelines Manager, California Office of Planning & Research
Carl Walker, Senior Engineer/Floodplain Manager, City of Roseville
Remi Mendoza, Associate Planner, City of Sacramento
Mary Jimenez, CA Department of Water Resources
4:00pm - 5:30pm  
Oasis 1, 2, 3

**CRS – Tips on Maximizing Credits and Getting It Done**

**Session Chair:** Salomon Miranda PE, MS, CA Department of Water Resources

- Utilizing the Community Rating System (CRS) to Lower Flood Insurance Rates: Deborah de Chambeau, PE, CFM, Riverside County Flood Control and Water Conservation District
- Risk MAP, NAI and CRS: One Activity = Many Credits!: Alisa M Sauvageot, CFM, Michael Baker International
- CDBG-DR, BW-12, CRS and Dauphin County, PA: What Do They Have in Common?: Kristen Gelino, MUP and Rob Flaner, CFM, Tetra Tech, Inc.

4:00pm - 5:30pm  
Oasis 5, 6, 7

**Arid Flood Management**

**Session Chair:** Eric Clyde, MWH Global

- Regional Watershed Planning Tool for Application of Integrated Flood Management (IFM) in Arid Areas: Bruce M. Phillips, PACE Advanced Water Engineering
- Palm Canyon Wash – History of Scour Problems and Current Proposed Countermeasures: David S. Smith, PE, CFM, DWRE, and Rosa Aguilar, EIT, WEST Consultants, Inc.; Andrea Gonzalez, EIT, Riverside County Flood Control and Water Conservation District

4:00pm - 5:30pm  
Ambassador 6

**Levees – Evaluation and Remediation Case Studies**

**Session Chair:** Shayan Rehman, Sacramento County

- A Public Agency’s 25-year Experience with Sheet Pile as a Levee Construction Material: Headache or Blessing?!: Phil Jones, County of Orange, OC Public Works
- The Santa Maria River Levee: Thomas D. Fayram, PE, CFM, Santa Barbara County; Mark Seits, PE, CFM, HDR Engineering; Jon Frye, PE, CFM, Santa Barbara County Flood Control District
- Alamitos Creek Flood Study: Gabriel Vallin and Liang Xu, PE, Santa Clara Valley Water District

4:00pm - 5:30pm  
Ambassador 7

**Multi-Benefit Projects – Flood, Water and the Environment**

**Session Chair:** Derek Larsen, Larsen and Wurzel

- Putah Creek Restoration Project: Chad Ballard, cbec, inc.
- Multi-Benefit Project Reduces Flood Risk, Improves the Environment, and Enhances Public Recreation along the Feather River: Chris Fritz, PE, CFM, Peterson Brustad, Inc.; Mike Inamine and Michael Bessette, Sutter Butte Flood Control Agency
- Channel Restoration for the San Clemente Dam Removal: Adam Raczynski, PE, CFM, Tetra Tech, Inc.
- Water Rights and Sustainability: Jay Sullivan, PE, CFM, Michael Baker International

5:30pm-7:30pm  
Exhibit Hall  
Celebrity Ballroom ABCDE

**Grand Reception and Networking**
Thursday, September 10, 2015

Registration

Continental Breakfast

Meet the FMA Board of Directors and the Executive Director

CONCURRENT SESSIONS

9:00am - 10:30am
Rancho Mirage

Panel: Regional Flood Management Planning Overview
**Moderator:** Mike Mierzwa, CA Department of Water Resources
Following adoption of the 2012 Central Valley Flood Protection Plan (CVFPP), the California Department of Water Resources (DWR) launched a Regional Flood Management Planning (RFMP) effort to help local agencies develop comprehensive regional flood management plans that describe local flood management priorities, challenges and potential funding mechanisms, as well as define site-specific improvement needs. A panel discussion with representatives from each of the six planning regions will explore the purpose and value of regional planning and how collaboration and integration at the local, regional and state levels helps contribute to broad intended outcomes for flood and water management. A break-out exercise will focus on how management actions or projects can be reviewed to understand their direct expected contributions toward flood management goals.

*Representative from each RFMP, TBD*

Mike Mierzwa, CA Department of Water Resources

9:00am - 10:30am
Ambassador 5

Panel: To Multi Benefit and Beyond: Planning and Implementing for Sustainable Outcomes
**Moderator:** Terri Wegener, DWR
The term, “Multi-Benefit” or “Multi-Purpose” may have different definitions to various groups, particularly as the concept and application of multi benefit has evolved over time. Yet, we need to understand what multi-benefit means to a flood-focused audience in the context of Integrated Water Management, and establish approaches that will 1) resonate with the values of local communities 2) aid those who are attempting to implement it, 3) prioritize multi benefit, integrated policies, programs and projects and 4) promote alignment on where and how to invest.

This panel will discuss considerations for multi-benefit planning and implementation for a flood-focused audience, the challenges of implementing multi-benefit projects, what successful multi-benefit projects looks like, and integration as a foundation for successful planning and implementation, and planning and implementing to reach sustainable water management outcomes. The panel will address the following questions: 1) What is Multi-Benefit for a flood-focused audience?; 2) What are the challenges of developing a Multi-Benefit, Integrated Master Plan?; 3) What does success look like?; 4) What lessons have we learned?; and 5) How can we plan and implement for Sustainable Water Management outcomes?

*Craig Conner, US Army Corps of Engineers*

*Liang Lee, Santa Clara Valley Water District*

*Terri Grant, Los Angeles County Flood Control District*

*Robyn Suddeth, CH2M Hill*

9:00am - 10:30am
Celebrity H

Panel: 2D Modeling – 2D or Not 2D
Following a short presentation of the Draft FMA White Paper summarizing the results of work of the blue ribbon panel and the previous FMA Symposia on this issue, the panel members will discuss how 2D models improve/confuse/hinder/help FEMA mapping projects.

**Moderator:** Kathy Schaefer or Thomas Plummer

*Pal Hegedus, Hegedus, Inc.*

*Kathy Schaefer*
CONCURRENT SESSIONS

9:00am - 10:30am
Celebrity G

Panel: Enhancing National Flood Insurance Program (NFIP) Resources to Support Coastal Community Efforts to Plan for and Adapt to Sea Level Rise
Moderator: Lauma Willis (Jurkevics), DWR
As presently constituted, FEMA does not explicitly address climate change impacts in the NFIP, although there is a general provision allowing program applicants to consider “expected future conditions” in the context of program compliance. Congressional bill HR 4348 was enacted in June 2012 to reauthorize the NFIP; among other things, it called for the establishment of a Technical Mapping Advisory Council (TMAC) to provide FEMA guidance on how to consider sea-level rise in NFIP flood insurance rate maps (FIRMs). Before this guidance is made available, local agencies may desire to address sea-level rise and related coastal flooding processes under the NFIP rubric of the “expected future conditions” provision. This session will include results from a California focused pilot project which was a collaboration of the California Department of Water Resources, Ocean Science Trust, and Scripps Institution of Oceanography that provides information that local communities and agencies can use for consideration in compliance with both existing and future California policies related to sea-level rise and coastal flooding and potential future regulatory directives from the NFIP.

Scott Edelman, AECOM
Marisa Villarreal, California Ocean Science Trust
Steve Cowdin, David Ford Consulting Engineers
Bob Battalio, Environmental Science Associates
Mary Small, Coastal Conservancy

9:00am - 10:30am
Oasis 1,2,3

Technical Sessions: Awareness: Looking Back and Looking Ahead
Session Chair: Tory Walker, PE, CFM, Tory R. Walker Engineering
Community Outreach in a Digital Age: Bruce Bender and Emmakate Young, FloodSmart
Katrina in Your Rearview Mirror: W. F. Marcuson III, PhD, PE, Lawrence H. Roth, PE, GE
Keeping Your Assets Above Water (Integrating Floodplain Management and Land Use Planning): John Moynier, Stantec

9:00am - 10:30am
Oasis 5,6,7

Arid Regions Hydrology and Resiliency
Session Chair: Jonathan Fuller, PE, RG, PH, CFM, DWRE, JE Fuller Hydrology and Geomorphology, Inc.
• Determination of New Design Storm Characteristics for the State of Nevada: Jeff House, Kimley-Horn and Associates; and Baxter Vieux, PhD, PE, Vieux and Associates, Inc.; Brian Wilson, PE, Nevada Department of Transportation
• Estimating Design Discharges for Arid Region Watersheds – Methods Used and Challenges Faced for the Whitewater River Watershed, Riverside County, California: David S. Smith, PE, CFM, DWRE, WEST Consultants, Inc.; Stuart McKibbin, PE, CFM, Riverside County Flood Control & Water Conservation District
• Achieving Flood Resiliency while Reducing Regulatory Risk: Richard Beck, PWS, CEP, CPESC, Michael Baker International

9:00am - 10:30am
Ambassador 7

Multiple Facets of a Lower Cosumnes River Floodplain Restoration Project
Session Chair: Judah Grossman, PhD, The Nature Conservancy
• Multiple Facets of a Lower Cosumnes River Floodplain Restoration Project: Judah Grossman, PhD, The Nature Conservancy; Thomas Smith, PE, GE, RiverSmith Engineering, Inc.; Satya Gala, PhD, PE, GEI Consulting; Eric Htain, AECOM; Nathaniel Seavy, PhD, Point Blue Conservation Science; Alison Whipple, PhD Candidate, UC Davis Center for Watershed Sciences

10:30am -11:00am
Break
CONCURRENT SESSIONS

11:00am - 12:30pm  Rancho Mirage
Panel: Keeping up with the NFIP and Communicating Risk  
**Moderator:** Eric Simmons, FEMA Region IX  
Law and policy seem to be changing constantly in the NFIP. This panel will explain the most recent changes along with efforts that both local agencies and FEMA are employing to communicate risk.  
**Edie Lohmann,** FEMA  
**Bruce Bender,** Bender Consulting Services  
**Lisa Messano,** Michael Baker International

11:00am - 12:30pm  Ambassador 4
Panel: Conservation of Flood Waters/Stormwater Capture  
**Moderator:** Mark Wills, Chief of Planning Division, Riverside County and Water Conservation District  
This panel discussion focuses on the history, current developments and future prospects for implementing stormwater capture and groundwater recharge projects in Southern California. Panelists from LA County Dept. of Public Works, Santa Ana Watershed Project Authority, San Bernardino Valley Municipal Water District and Riverside County Flood Control and Water Conservation District will discuss the opportunities and challenges associated with the development, operation and maintenance of stormwater capture and groundwater recharge projects in Southern California.  
**Martin Ariaza,** Los Angeles County Dept. of Public Works  
**Doug Headrick,** General Manager, San Bernardino Valley Municipal Water District  
**Stuart McKibbin,** Chief of Watershed Protection Division, Riverside County Flood Control and Water Conservation District

CONCURRENT SESSIONS

11:00am - 12:30pm  Oasis 1, 2, 3
Technical Sessions:  
**What If? Emergency Action Plans**  
**Session Chair:** John Paasch, CA Department of Water Resources  
- Web Based Tool to Support the City/County of Sacramento Emergency Action Plan: Connie Perkins, City of Sacramento; Chris Ferrari and Donghai Wang, GEI Consultants  
- Development of Floodplain Mapping and Emergency Action Plan for City of Roseville: David C. Curtis, PhD, Om Prakash, PhD, PE and Jeff Harris, PH, WEST Consultants, Inc.; Carl Walker, City of Roseville; Thomas Plummer, PE, Civil Engineering Solutions  
- Toward a Robust Flood Emergency Evacuation: Integration of 2D Hydraulic Modeling and Dynamic Evacuation Routing: Sheng Tan, GISP, Chris Huxley, Kyle Morgan, Wayne Li, PhD, and Shyamal Chowdhury, PhD, Wood Rodgers; Yiguo Liang, PE, PhD, CA Department of Water Resources

11:00am - 12:30pm  Oasis 5, 6, 7
Multi-Dimensional Modeling  
**Session Chair:** Dale Kerper, MSCE, PE, DHI, Water and Environment, Inc.  
- North Indio East Side Dike Flood Hazard Analysis and HEC-RAS 2D Model Comparisons: Jimmy Pan, Brady, McDaniel, and Andrey Shvidchenko, Northwest Hydraulic Consultants; Dan Charlton, Tesfaye Demissie, David Wilson, and Mark Johnson, Coachella Valley Water District  
- Comparison and Utilization of 1D, 2D, and 3D Hydraulic Models on a Complex Diversion Structure: Brinton Swift, HDR, Inc.  
- Comparison of 1D and 2D Results for Floodplain Mapping in an Urban Zone AO: Paul Wisheropp, PE, CFM and Atalia Raskin PE, Cardno, Inc.; Michael Johnson, PE, Sacramento County Department of Water Resources
11:00am - 12:30pm
Ambassador 6

**Levees – Central Valley Methods**

**Session Chair:** Paul Robinson, CH2M

- Levees: Public Safety Infrastructure or Backyard Amenity? Addressing Encroachments as part of SBFCA’s 37-Mile Levee Improvement Project: Michael W. Bessette, PE, Sutter Butte Flood Control Agency; Jonathan Kors, PE, Wood Rodgers, Inc.
- Assessment of Existing Levee Penetrations As Part of a ULDC Analysis: Mike Rossiter, PE, Peterson Brustad, Inc.
- Using Tolerable Risk Guidelines in the California Delta: A Case Study: Lawrence H. Roth, PE, GE, Jessica Ludy, CFM
- Advanced 1D/2D H&H Modeling for Urban Drainage Design and Stormwater Master Planning: Brian Rowley, PE, CFM, Atkins North America, Inc.

11:00am - 12:30pm
Ambassador 7

**Multi-Benefit Projects – Flood, Sediment and Restoration**

**Session Chair:** Harvey Oslick, Wood Rodgers, Inc.

- Aliso Creek Ecosystem Restoration Alternatives: Dragoslav Stefanovic, PhD, PE, DWRE, Tetra Tech, Inc.; Jonathan Vivanti, PE, USACE Los Angeles District
- Sediment Source Analysis to Inform Multi-Objective Floodplain Planning for Wildcat Creek, California: Anthony Falzone, NewFields; Joe Sullivan and Matthew Graul, East Bay Regional Park District; Laurel Collins, Watershed Sciences

11:00am - 12:30pm
Celebrity H

**2D Modeling – Comparing The Alternatives**

**Session Chair:** Hassan Kasraie, PE, Kasraie Consulting

- Comparing 2D Approaches for Complex FEMA Studies: Mike DePue, PE, CFM, Atkins North America, Inc.; Ted Cassidy, PE, PH and Sam Crampton, PE, CFM, Dewberry
- Benchmarking State of the Art Two-Dimensional Hydraulic Modeling Tools: Murari Paudel, Cody Milligan and Soledad Berbel Roman, Wood Rodgers; Phillip Ryan, BMT WBM
- Comparing HEC-RAS v5.0 2D Results with Verification Datasets: Tom Molls, PE, PhD, DWRE, CFM, Ric McCallan, PE, Michael Konieczki, PE, William Sicke, PE and Holly Canada, PE, David Ford Consulting Engineers, Inc.
- Does it Matter Doing 2D Flood Modeling 150 Times Faster: Reinaldo Garcia, Hydronia, LLC, Pedro Restrepo, Mike DeWeese, Mark Ziemer, Justin Palmer, and Jonathan Thornburg, NOAA NWS CNRFC; Pilar Garcia-Navarro, Asier Lacasta and Mario Morales, University of Zaragoza, Spain

12:30pm -2:00pm
Celebrity Ballroom ABCDE

**Lunch and Networking in the Exhibit Hall**

1:00pm - 2:00pm
Mission Hills Boardroom

**FMA Coastal Committee**

“Coastal Planning for an El Niño-Southern Oscillation (ENSO) Event”

**Coastal Chair:** Vince Geronimo

Anyone interested in coastal issues or joining the newly formed FMA Coastal Committee is welcome to attend.
Panel: DWR Central Valley Flood Protection Plan  
**Moderator:** Amy Bindra, CA Department of Water Resources and Mary Jimenez, CA Department of Water Resources  
The Central Valley Flood Protection Plan (CVFPP) is a critical document that is being developed to guide California’s participation (and influence federal and local participation) in managing flood risk along the Sacramento River and San Joaquin River system. DWR is currently conducting Basin-Wide Feasibility Studies in the Sacramento and San Joaquin basins that integrate information developed as part of the Conservation Strategy and six Regional Flood Management Plans and perform technical evaluations related to flood system performance, ecosystem benefits and other benefits associated with multi-objective flood planning. This information will be used to provide a foundation for prioritizing Central Valley flood risk reduction and related ecosystem restoration and multi-benefit investments that support the goals of the CVFPP.  
**Mike Mierzwa,** Central Valley Flood Protection Plan Overview, CA Department of Water Resources  
**Rummy Sandhu,** Technical Evaluations for the Sacramento BWFS in Support of CVFPP 2017, CA Department of Water Resources  
**Eric Tsai, David Arrate,** Technical Evaluations for the San Joaquin BWFS in Support of CVFPP 2017, CA Department of Water Resources  
**Mary Jimenez,** Ecosystem Benefits Analysis for Multi-Objective Flood Planning, CA Department of Water Resources  
**Stephen Hatchett,** Evaluating Other Benefits Associated with Multi-Objective Flood Planning, CH2M  
**Amy Bindra,** Climate Change Considerations for 2017 CVFPP Update, CA Department of Water Resources

Panel: Increasing Opportunities through Intergovernmental Collaboration  
**Moderator:** Robert Bezek, FEMA  
When agencies collaborate, not only are they expanding their pool of available resources, but relationships develop that can lead to increasing mutual benefit. The following panelists will share how their efforts across agencies have resulted in relationships they look to leverage well into the future.  
**Shannon Summers,** Mohave County Flood Control District  
**Rachael Orellana,** PE, Flood Risk Program Manager, Sacramento District, US Army Corps of Engineers

**Risk Awareness**  
**Session Chair:** Cassandra Nguyen Musto, CA Department of Water Resources  
- Golden Valley Flood Response Plan: Shannon Summers, CFM, Mohave County Flood Control District; Brian Schalk, PE, CFM, Atkins North America, Inc.  
- Flood Risk Communication: Do You Know as Much as a Math Nerd?: C. Warren Campbell, PhD, PE, CFM, Hall Professor of Civil Engineering, Western Kentucky University, Engineering  
- Preparing for the Worst: Stafford Dam Emergency Action Planning and Risk Awareness: Michael Skowronek, GISP, CFM, AICP, and Jeffery Crump, PE, CFM, Michael Baker International

**LID Benefits in Floods**  
**Session Chair:** Brent Siemer, PE, FASCE, CFM, ENVSP, City of Simi Valley  
- Evaluation of GI/LID Benefits in the Desert Environment – Pima County, AZ: John S. Wise, PE, CFM, Env SP, Stantec Consulting Services, Inc.  
- Nuview School Green Parking Lot Retro-fit: How to Solve Structural Flooding and Achieve 100% Infiltration of Runoff: Jennifer J. Walker, PE, DWRE, CFM, QSD, Watearth
2:00pm - 3:30pm
Ambassador 6

The USACE Levee Safety Program
Presentations will be provided on all aspects of the USACE Levee Safety Program. This will include the Periodic Inspection Program (and results of the LA District inspections and how they compared to national results), the Levee Screening Program, how Levee Safety Action Classification (LSAC) ratings are assigned, the expanded emphasis on Emergency Action Plans (EAPs) to be developed in a partnership between the levee owner and the USACE, and the Rehabilitation Program (including updated requirements for active status and how to transition from inactive to all aspects of the USACE Levee Safety Program.

**Jody Fischer**, USACE Los Angeles District Levee Safety Program Manager
**Andrew Martin**, USACE Los Angeles District Emergency Operation Branch
**Patti Sexton**, Vice-President, Tetra Tech

2:00pm - 3:30pm
Celebrity H

2D Modeling in Practice 1 (Case Studies)

**Session Chair**: Shweta Chervu, PE, CFM, Psomas

- Large Scale Flexible Mesh 2D Modelling of the Lower Namoi Valley: Mark Britton and Craig Mackay, DHI Water and Environment Pty Ltd.; Neal Albert, Office of Environment and Heritage, New South Wales
- Search for Alternative Solutions to the Impacts of Sea Level Rise in the South San Francisco Bay: Rohin Saleh MS, PE and Dale Kerper, PE, Alameda County Flood Control District
- Can 2D Modeling Improve Map Accuracy and Floodplain Management?: Michael Johnson, PE, Sacramento County Department of Water Resources; Paul Wisheropp, PE, CFM and Atalia Raskin PE, Cardno, Inc.

2:00pm - 3:30pm
Celebrity G

Flooding Aspects of Alluvial Fans

**Session Chair**: Mark Wills, Riverside County Flood Control and Water Conservation District

- Impact of Storm Drains on Urbanized Alluvial Fan Flooding in Ventura County, California: Noemi Gonzalez-Ramirez, PhD and Jimmy O’Brien, PhD, PE, FLO-2D Software, Inc.
- Flood Control Planning Below Alluvial Fans Oasis Area Stormwater Master Plan: Aric Torreyson, PE and Nathan Schreiner, PE, Tetra Tech, Inc.; Tesfaye Demissie, PE, Dan Charlton, PE and Mark Johnson, PE, Coachella Valley Water District

2:00pm - 3:30pm
Celebrity

Riverine Modeling

**Session Chair**: Cameron Jenkins, WEST Consultants, Inc.

- Prototype Flood Model Developed for the Jordan River in Jordan: Om Prakash, PhD, PE, David Curtis, PhD and Jeff Harris, PH, WEST Consultants, Inc.
- Carson River, NVPMR: Integrating New Paradigms into a FEMA Physical Map Revision Process: Mitchell Blum, PE, CFM and Mark Forest, HDR Engineering; Edwin James, Carson Water Subconservancy District; Eric Simmons, FEMA, Region IX

3:30pm - 4:00pm
Break
Panel: Drought to Flood: Impacts of Extreme Weather Conditions
Moderator: David Pesavento, CA Department of Water Resources
Droughts test our ability to be resilient. They bring into focus the devastating long-term impacts, such as land subsidence due to excessive groundwater pumping, water quality, wildlife and habitat impacts, wildfires, seawater intrusion, as well as impacts to our economy. California is in our fourth year of drought and we are all looking for a remedy to help stave off the distress that makes recovery more challenging. With the emerging El Niño event, come memories of the storms in the winter of 1997-98 that caused floods resulting in 17 deaths and more than half a billion dollars in damage. With our understanding that “great droughts usually end in great floods,” how are we preparing for the potential change from drought to flood. Or should we be preparing for another year of drought? This panel will discuss these topics, as we continue to acknowledge that floods can occur during droughts and that California is a state of extremes.

Jeanine Jones, Interstate Resources Manager, CA Department of Water Resources
Alan Haynes, Service Coordination Hydrologist, NOAA/NWS California Nevada River Forecast Center, “Messaging Water Resources Forecasts During California’s Drought” & “Will El Nino End the Drought This Season?”
Mike Mierzwa, “Addressing Hydrologic Variability in Complex Water Management Systems”
Daniel Bunk, USBR River Operations Group Manager, Lower Colorado Region’s Boulder Canyon Operations Office

Panel: Arid Regions Extreme Hydrology: Raining Hard & Heavy – Really?
Moderator: Marty Teal, WEST Consultants, Inc.
This panel session will focus on meteorology and hydrology topics relative to arid regions. Come and discuss phenomena such as El Niño, atmospheric rivers, flash flooding and others!

Alex Tardy, NOAA
Art Diaz, Riverside County Flood Control and Water Conservation District
Eylon Shamir, PhD, Hydrologic Research Center
Andrew Martin, PhD, Scripps Institute of Oceanography Representative

Flood Control and Cultural Resources: Legal and Regulatory Considerations
This presentation will examine the legal requirements for consideration of cultural resources issues under federal and state law for flood control project. Almost all flood control projects require environmental review triggered by a federal, state, or local agency permit or decision. Federal agencies must consider the environmental impacts of their proposed actions under the National Environmental Policy Act (NEPA), and many states have their own “mini-NEPA” laws that require state and local agencies to identify and mitigate for environmental impacts. Both federal and state laws (especially in California) require consideration of impacts on cultural resources, and these laws and regulations can overlap or even contradict each other. In California, for example, CEQA is changing starting July 1, 2015 to require additional consideration of tribal cultural resources. A particular challenge with many flood control projects is that they are often located along perennial or ancient waterways, which are associated with tribal cultural resources and archaeological sites, leading to a politically-charged regulatory environment. The presenters will give an overview of federal and state legal requirements and offer practical tips on approaching these issues both before and during construction of flood control projects.

Andrea Clark, Partner, Downey Brand LLP
Lisa Westwood, Cultural Resources Manager, ECORP Consulting, Inc.

Funding Projects
Session Chair: Alex Yescas, Atkins North America, Inc.
• How We Divorced our Project from the Corps of Engineers and Why You Should Too: Paul R. Detjens, PE, Contra Costa County Flood Control & Water Conservation District
• Funding a Multi-Objective Flood Control Project In A Climate of Drought ($$$): A Re-examination of the Federal/Local Funding Model: Albert Martinez and Mark Wills, Riverside County Flood Control & Water Conservation District
• Community Support for Flood Assessments in Delta Islands: Engaging the Public in a Local Funding Measure for Bethel Island Municipal Improvement District: John Bliss, PE, Jennifer Per Lee and Kyle Tankard, SCI Consulting Group
**GIS Methods for Arid Issues**

*Session Chair:* Kirk Wheeler, SWSV

- Wildfire and Flood Hazards, Using GIS Tools to Jointly Assess Risk for Mitigation Plans and Emergency Management: Stephanie Routh, CFM, Laurel McGinley, PE, and Sam Crampton, PE, Dewberry
- A GIS-Based Hydromodification Assessment Method Utilizing a Sediment Transport Proxy in Semi-Arid Southwestern Streams: David A. Jaffe, PhD, PE, DWRE, AECOM

**Shining a Light on FEMA’s LAMP, The NFIP and ESA Compliance**

*Session Chair:* Robert Welch, PE, CFM, Atkins North America, Inc.

- National Flood Insurance Program: Phillip Dunn, ANFI, National Flood Services

**Levees – Standards and Certifications**

*Session Chair:* Debra Bishop, H.T. Harvey and Associates

- Geotechnical Evaluation of a Small Levee System for FEMA Certification: Rebecca Money, PE, GE, CFM, Kleinfelder, Inc.
- Highlights of the International Levee Handbook: Rachael Orellana, PE, USACE
- The Elements of Successfully Controlling a Flood of Data: Jacob Weber and Meredith Beswick, GIT, PE, Kleinfelder

**Flood Forecasting, Operations and Planning**

*Session Chair:* Chris Huxley, Wood Rodgers, Inc.

- Hope is not a Strategy – Why Regionally Integrated Emergency Response Planning is a Mission Critical Function for Flood Management Agencies: Lewis Bair, Reclamation District 108; Barry O’Regan, PE, Ronald Baldwin and Elizabeth Avelar, Kjeldsen, Sinnock, Neudeck, Inc.
- Innovative Tsunami Preparedness, Response, and Planning Tools for California Communities: Rick I. Wilson, California Geological Survey; Kevin M. Miller, California Governor’s Office of Emergency Services
- RAFT - Rapid Assessment of Flooding Tool: Ryan Cahill, Oregon Silver Jackets Coordinator, USACE-Portland District

**2D Modeling in Practice 2 (Case Studies)**

*Session Chair:* Yiguo Liang, CA Department of Water Resources

- Utilizing Two Dimensional Hydraulic Modeling on West Cathedral Channel: Yunjing (Vicky) Zhang, PE, CFM, Mark Seits, PE, CFM and Mitchell Blum, PE, CFM, HDR Engineering; Deborah de Chambeau, PE, CFM, Riverside County Flood Control and Water Conservation District
- Fluvial Audit and Detailed 2D Modeling Combined for Morphodynamic Analysis of Stream Degradation: Chris Bowles, PhD, PE, Jai Singh, BS and Chris Campbell, MS, cbec, inc.
- Two-Dimensional Modeling for the Basin-Wide Feasibility Study: Devinder S. Dhillon, P.E., CA Department of Water Resources
- Numerical model verification of a whitewater kayaking run with physical model results: Clark Barlow, P.E., CFM, Senior Engineer, Atkins North America, Inc., Royd Nelson, P.E., Vice President, Aquaveo, LLC, Scott Shipley, M.S., P.E., President, S20 Design and Engineering
4:00pm - 5:30pm  
**Celebrity F**  
**Special Hydrololgic Techniques**  
**Session Chair:** Samson Haile-Selassie, CA Department of Water Resources  
- Strategies to Establish Flood Frequencies Associated with Flood Event High Water Marks: Kevin Coulton, PE, CFM, cbec, inc.; Alan Lulloff, PE, CFM, ASFPM  
- Hydrograph Cloning for Integrated Stormwater Management and Hydromod Treatment Control: Andrew Ronnau, PhD, PE, Pacific Advanced Civil Engineering, Inc.  
- Addressing the Challenges of Distributed Hydrologic Modelling for Operational Forecasting: Stephen Blake, DHI, Inc.; M.B. Butts, K. Yamagata, J. Kobor, E. Fontenot  
- Application of Kinematic Wave in Urban Hydrology: Robin Saleh, MSCE, PE, Alameda County Flood Control District

6:00pm - 8:00pm  
**Rancho Mirage**  
**Reception and Tour of the Palm Springs Air Museum**  
Buses departing the hotel beginning at 6:00pm

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**Friday, September 11, 2015**

**8:00am - 8:55am**  
**Continental Breakfast – Celebrity Ballroom Foyer**

**8:30am - 12:00pm**  
**Oasis 1**  
**CFM Examination**  
Advance (3 weeks) registration with ASFPM required at www.floods.org  
**Proctoring:**  
**Edward Perez,** South Central Region NFIP Floodplain Management Specialist, California Department of Water Resources  
**Garret Tam Sing,** Southern Region NFIP Flood Management Specialist, California Department of Water Resources

**CONCURRENT SESSIONS and FIELD TRIPS**

**9:00am -10:30am**  
**California Silver Jackets Team Meeting – Working together to reduce flood risk in the State of California**  
Please join fellow representatives of local, tribal, state and federal agencies as we come together to facilitate collaboration, share information, and leverage resources to identify and implement solutions to reduce flood risk in the State of California. You will hear an overview of the Silver Jacket’s concept and how the California Silver Jackets Team has developed, help plan for the future, and hear some examples of interagency projects. The primary purpose of this meeting is to hear from you. We would like to hear what you are excited to see the California Silver Jackets Team work on as we move forward. This meeting is open to all city, county, tribal, state and federal agencies. We hope to see you there.  
**Facilitators:** Rachael Orellana, USACE, and Terri Wegener, DWR

**9:00am -10:30am**  
**Ambassador 4**  
**FMA’s Introduction to HEC-RAS 5.0**  
HEC-RAC 5.0 represents the most substantial change to HEC-RAS in almost 15 years. One of the key elements of this version is the incorporation of a two-dimensional modeling feature that will allow users to build a 1D/2D combined model as well as independent 2D model. The 2D solution scheme used in HEC-RAS is a unique solution that is significantly different from other public domain or proprietary models. This HEC-RAS upgrade will likely bring about significant industry changes and spark an increase in the use of two-dimensional solutions for floodplain analysis, dam breach analysis, bridge hydraulics and many other applications. This workshop will offer participants with an overview of the following:  
- Overview of new features in HEC-RAS 5.0:  
  - 2D modeling tools  
  - 1D/2D modeling tools  
  - RAS Mapper Utility  
  - Additional dam breach tools  
  - Additional sediment transport functions  
- Differences between HEC-RAS and other 2D Modeling schemes  
- Reviewing HEC-RAS 2D models and indentification of common errors  
- Example applications  
- Discussion regarding advantage and disadvantages of 2D models  
  **Mark Forest,** HDR Engineering, Inc.  
  **Pal Hegedus,** Hegedus, Inc.  
  **Martin Teal,** WEST Consultants, Inc.
Central Valley Flood Risk
Session Chair: Mary Horvath, PE, CFM, CH2M
- Development of Stage-Frequency Curves in the Sacramento - San Joaquin Bay Delta: Romain Maendly, CA Department of Water Resources
- Addressing Risk in a Changing Watershed Understanding Model Calibration before Model Use: Michael C. Nowlan, PE, CFM, John Pritchard, PE, CFM and Rajmani Subedi, PE, PH, CFM, Wood Rodgers; Yiguo Liang, PE PhD, CA Department of Water Resources
- Integrate Multi-Objective Floodplain Planning for the Central Valley Flood Protection Plan (CVFPP) Conservation Strategy: Mark Tompkins, Flow West

Flood and Water Quality Warning
Session Chair: Bunny Souza, Nevada Division of Water Resources
- Creating a Flood Warning System for the San Diego River: Martin J. Teal and Darren Bertrand, WEST Consultants; Rand Allen, County of San Diego
- Flood Warning and Water Quality Telemetry Design for Albuquerque: Jim DeAngelo, CFM, AECOM
- Improving Flood Stage Forecasting at Key Locations in the Feather River Watershed: Ashok Bathulla, Ron Manning, Mark Fortner and Katherine Maher, GEI Consultants; Mitch Russo and MD Haque, CA Department of Water Resources

Modeling Issues Reality Check
Session Chair: Chakri Malakpet, PE, CFM, CH2M
- Modeling the Kings River Delta Levees using 1D/2D methods in Kings County, California: Joseph E. Thomas, PE*, CFM; AECOM Engineering Manager, Co Presented by Eric Simmons and Glenn Wright
- Considerations for the Selection of a Numerical Model for Ecosystem Restoration Projects: Tom Josephson, Habitat Restoration Project Manager, CESCL Columbia River Estuary Study Taskforce, Kevin Coulton, PE, CFM, Senior EcoEngineer, inc. eco engineering, Chris Campbell, Director, inc. eco engineering.
- Hydrologic and Hydraulic Modeling Reality Check!: Ted Cassidy, Dewberry

Approaches on Climate Change Issues
Session Chair: Nicolle Burnham, City of San Jose
- Climate Change, Coastal Hazards Mapping and Shore Response Modeling in California: Robert Battalio, PE, Environmental Science Associates
- Climate Change Resilience and Ecosystem Enhancement: Elizabeth Andrews, PE, Environmental Science Associates
- A Methodology to Assess Climate Change Vulnerability Using Downscaled Climate Model Data: Impacts and Adaptation Options for the State Highway System in Northern California: Louis White, PE, and James Gregory, PE, Environmental Science Associates
- Best Practices for Hazard Identification and Mapping of PFD and LiMWA on West Coast: Darryl Hatheway, Sr. Coastal Scientist, CFM, AECOM

Friday Field Trips
Thomas E. Levy Groundwater Replenishment Facility
Join Coachella Valley Water District staff for a tour of the Thomas E. Levy Groundwater Replenishment Facility, where approximately 35,000 acre-feet of Colorado River water is replenished each year into the Coachella Valley’s aquifer. The 163-acre site includes two 422,000-gallon reservoirs, four vertical turbine pumps capable of producing a combined 1,550 horsepower and 39 persolation basins unhindered by California’s current drought. Meeting at 9:00am in the lobby.

Eagle Canyon Dam Site Riverside County
Pre-Trip Meeting Location: Oasis 3
Hosted by: Bob Cullen, Chief of Design and Construction, and Helio Takano, Resident Engineer
Join Riverside County Flood Control and Water Conservation District staff for a tour of the recently completed Eagle Canyon Dam project located in nearby Cathedral City. The tour will begin at 8:30am with a 30-minute project briefing in Oasis 3, followed by transportation to the dam site (approximately 15 minutes). Once arrived, guests will be split into two groups and given an up-close viewing of the dam. Guests will have to endure approximately 60 minutes of no AC before being whisked back to the hotel. Appropriate footwear is encouraged. Cold beverages will be provided.
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