Arizona Floodplain Management Association
Fall 2018 Conference

Keynote Speaker - Ryan Jenkins

Lead and Work Across Generations:
Proven Strategies for Connecting and Engaging a Multi-Generational Workforce

- Internationally published Author and Inc Magazine columnist
- Spent over 7 years as a speaker helping organizations gain clarity around the emerging generations

November 7-9, 2018

Tucson, Arizona

Tucson Marriott University Park Hotel

Conference Cost: $300, Includes Thursday Dinner (Additional Dinner Guests: $35)

880 E 2nd Street, Tucson, AZ 85719

Tucson Marriott University Park Hotel
(Photo courtesy of Jack Moody)

Note: Room rate of $135 (plus taxes and fees) available at Tucson Marriott University Park Hotel

Reserve your room by calling (520) 792-4100.

Identify yourself as part of the *Arizona Floodplain Management Association* Conference

Cutoff for guest room registration to receive the rate is October 6, 2018.

Attention CFMs! Conference has been pre-approved for CECs by ASFPM (Thursday morning 2.5 CECs, Thursday afternoon 3 CECs, Friday morning 3 CECs) Workshop and field trip – see descriptions for CECs

Arizona Floodplain Management Association
Fall 2018 Conference

Wednesday November 7th

Wednesday, November 7th: Training Classes – Schedule of Events (See Descriptions of Classes for more information)

Room	Ventana	Canyon B	Canyon A	Conference Room 223
8:00 AM			Interactive Workshop on Stormwater Green Infrastructure	Office Hours with FEMA & ADWR: Mapping (By Advance Appointment Only, See Page 5 for Additional Information)
8:30 AM		Groundwater Modeling for Flood-plain Managers		
9:00 AM	DDMSW software developed for the Flood Control District of Maricopa County			
9:30 AM				
10:00 AM				
10:30 AM				
11:00 AM				
11:30 AM				
Noon	*Lunch –Provided by AFMA (Sabino-Pima)*			
1:00 PM	Mis-Uses of HEC-RAS for Bridge Scour Analysis and other Bridge Scour Issues	Flood Directors' Meeting	CFM Exam (Must pre-register with ASFPM)	Office Hours with FEMA & ADWR: Mapping (By Advance Appointment Only, See Page 5 for Additional Information)
1:30 PM				
2:00 PM				
2:30 PM				
3:00 PM	ALERT2 101: What it is all About and Why it Matters			
3:30 PM				
4:00 PM				
4:30 PM				
5:00 PM				
5:30 PM	*Evening Reception and Registration in Atrium (Appetizers and Cash Bar, Dinner on your own)*			
6:00 PM				
6:30 PM				
7:00 PM				

1:00 to 4:00 PM, CFM Exam (Located in Canyon A)

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Description of Classes – Wednesday, November 7th

Interactive Workshop on Stormwater Green Infrastructure (8:00 am – 12:00 pm, 3.5 CECs) Canyon A
Kieran Sikdar, CFM, Ricardo Aguirre, P.E., CFM, Holistic Engineering and Land Management

- The role of engineering in community development
- Regenerative vs Degenerative Stormwater Engineering
- Design principles
- GI/LID and Regenerative practices
- A design exercise
- A tour of the AFMA conference facilities to inspire retrofits
- What are the policy implications/barriers/challenges for new/retrofit stormwater GI and regenerative solutions?

Groundwater Modeling for Flood-Plain Managers (8:30 am – 11:30 am, 3 CECs) Canyon B
Laurel Lacher, R.G., PhD, Lacher Hydrological Consulting, Cy Miller, P.E., J.E. Fuller
This course is designed to help flood-plain managers grasp the nuts and bolts of the typical groundwater model. Details of the conceptual and numerical components of a typical MODFLOW model will be presented and explained. MODFLOW is a free, open-source model developed and published by the US Geological Survey and has been the industry standard for decades.

DDMSW Software Developed for the Flood Control District of Maricopa County (9:00 am - 11:00 am, 2 CECs) Ventana
Kenneth Lewis, P.E., KVL Consultants, Inc.
DDMSW software is currently being used my many engineers in Arizona. The software has been under development since 1998 and the latest version 5.6.0 was recently released. The presentation will provide an overview of the software and working examples for Hydrology, Hydraulics and River Mechanics. Guidelines will be provided for users outside of Maricopa County. Sufficient time will be provided for questions throughout the presentation.

Mis-Uses of HEC-RAS for Bridge Scour Analysis and other Bridge Scour Issues (1:00 pm - 3:00 pm, 2 CECs) Ventana
David T. Williams, P.E., CFM, PhD, PH, CPESC, David T. Williams and Associates
The U.S. Army Corps of Engineers Hydrologic Engineering Center's HEC-RAS software (HEC-RAS) is the primary tool used in the water resources industry for hydraulic analysis. From its popularity for regular hydraulic analysis, it has also been popular for performing bridge scour analyses. The ease of using HEC-RAS for scour analyses is seducing in that an engineer can perform a "successful" analysis but does not have a full understanding of what the program is doing when performing the scour calculations. In addition, the bridge scour algorithms in HEC-RAS are based upon Hydraulic Engineering Circular No. 18 (HEC-18, 2001) but several updates have been issued with the latest being on April 2012. Since the HEC-RAS Version 3.0.1 was issue in 2001, HEC has not updated Version 5.0.3 based upon the HEC-18 document released in 2012. This workshop will point out subtle errors that can occur and explain the updates that were not input to HEC-RAS. Depending on time constraints, 10 examples or more will be presented to illustrate the potential errors and a list presented of the HEC-18 updates with discussions on their ramification on the HEC-RAS results.

ALERT2 101: What it is all About and Why it Matters (3:00 pm - 5:00 pm, 2 CECs) Ventana
Brian Cosson, CFM, ADWR, Peter Acton, PE, JE Fuller Hydrology & Geomorphology, Inc., Steve Waters, Flood Control District of Maricopa County
This workshop will cover all topics related to the ALERT2 flood warning telemetry protocol. This enhanced method of sending and receiving real-time hydro-meteorological data has been rolled out in select agencies throughout Arizona. The workshop will provide a thorough explanation of the theory behind ALERT2 including the need for a revised protocol. Thereafter, a state-wide assessment of the transition to ALERT2 will be discussed, and a detailed account of the transition by one agency will be presented. Lastly, time will be allotted for questions and subsequent discussion.

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Wednesday, November 7th Events

CFM Exam (1:00 pm to 4:00 pm, must pre-register with ASFPM) Canyon A.
The ASFPM Certified Floodplain Manager (CFM) exam will be proctored. To take the exam, you must pre-register through ASFPM; see http://www.floods.org/pdf/certapp.pdf for more information.

Flood Directors' Meeting (1:00 pm to 5:00 pm, advance appointment only) Canyon B.

Office Hours with FEMA and ADWR: Mapping (8:00 am to 5:00 pm, By invitation only) Conference Room 223
Schedule a time to meet with Ed Curtis from FEMA Region IX and Mike Shelton from ADWR to discuss Risk MAP, current or future engineering studies, levees, or other mapping issues in your community. Contact Mike Shelton at ADWR to schedule an appointment. meshelton@azwater.gov or 602-771-8428.

Evening Reception and Registration (5:30 pm to 7:30 pm) Atrium
Come register for the conference and join your fellow floodplain managers for an evening reception. Appetizers will be served, and a cash bar will be available.

Wednesday Dinner – On your own.

Arizona State Museum
(Photo courtesy of Jack Moody)

Arizona Floodplain Management Association
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Thursday November 8th

Keynote Speaker - Ryan Jenkins

Lead and Work Across Generations:

Proven Strategies for Connecting and Engaging a Multi-Generational Workforce

52% of workers say they're least likely to get along with someone from another generation. And 62% of Generation Z (the generation after Millennials) anticipate challenges working with Baby Boomers and Generation X. The generational gap at work has never been more daunting. Turn a multigenerational workforce into a competitive advantage.

Ryan brings market-leading insight to help your organization and leaders close the generational gap and improve communication, teamwork, innovation, and more.

A generationally diverse workforce is better equipped to respond to today's high-flux and disruption-prone marketplace. Since Millennials and Generation Z became a majority of the labor force, generational differences have never been wider as each generation has a varying perspective of work, leadership, communication, success, and technology.

A multigenerational workforce can create stifling challenges or bottom line-boosting advantages. Ryan will share his expert insights into how leaders and organizations can harness the advantages of a generationally diverse team.

ATTENDEES GAIN:

- Insights into the generational gap and why it exists
- Insights into each generation's values, behaviors, and expectations
- Perspectives of each generation's varying views of work, leadership, communication, and technology
- Strategies that are proven and actionable to close the generational gap at work
- Techniques for optimizing a multigenerational workforce
- Best-in-class examples of organizations successfully closing the generational gap
- Ability to work, communicate, and lead across generations
- Ability to work, communicate, and lead across generations
- Each attendee will receive a free copy of the Speakers book ***The Millennial Manual***

University of Arizona "Old Main"
(Photo courtesy of Jack Moody)

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Plenary Session (Sabino – Pima)	**7:00 to 8:00**		**Breakfast** in the Madera - Canyon
	8:00 to 8:05		**Call to Order and Announcements**
	8:05 to 8:15		**Local Welcome** by Michael Ortega, Tucson City Manager
	8:15 to 8:30		**Election Nominee Presentations – Voting Closes at 10:30 am**
	8:30 to 10:00		***Lead and Work Across the Generations*** Keynote Speaker, Ryan Jenkins; Author, and Inc.com Columnist
	10:00 to 10:30		**Break – Voting Closes at 10:30 am**
	10:30 to 11:00		***Alamo Wash Watershed Assessment*** John Wallace, P.E., Cyrus Miller, P.E., CFM, J.E. Fuller, Jiankang Wang, P.E., PhD, CMG Drainage Engineering
	11:00 to 11:30		***A Recap of the 42nd Annual ASFPM National Conference in Arizona*** Rebecca Timmer, Dibble Engineering
	11:30 to Noon		**Business Meeting and Election Results**
Noon to 1:30 ***Lunch - Provided by AFMA in the Madera-Canyon***			
Afternoon Concurrent Sessions	**1:30 to 2:00**	**Technical Track Sabino**	***Fluvial Geomorphology in an Arid Environment: A Case Study*** David T. Williams, P.E., CFM, PhD, PH, David T. Williams and Associates
	2:00 to 2:30		***LID Technical Standard Details and Specifications for Maricopa County*** Patrick Wolf, P.E., CFM, Bob Haneline, P.E., CFM, Dibble Engineering
	2:30 to 3:00		***Experiences of Erosion Control Applications, Including Some Case Histories in Arizona*** Stefano Rignanese, M.S., Maccaferri Inc.
	3:00 to 3:30		**Break**
	3:30 to 4:00		***Evaluation of CMIP5 Historical Simulations in the Colorado River Basin (CRB)*** Jenita Gautam, Arizona State University Graduate
	4:00 to 4:30		***Dynamic Modeling of Complex Storm Drain Systems*** Shimin Zou, P.E., CFM, PhD, Daniel Selk, P.E., CFM, J2 Engineering and Environmental Design
	4:30 to 5:00		***Real Time Flood Forecasting Software for Flood Prone Roadways along Skunk Creek in Phoenix*** Carlos Carriaga, P.E., CFM, PhD, Bing Zhao, P.E., PhD, Flood Control District of Maricopa County
	1:30 to 2:00	**Programs and Policies Track Pima**	***How the Program for Public Information Can Help You Buy a Home*** Joseph Cuffari, CFM, Pima County Regional Flood Control District
	2:00 to 2:30		***Web Based Floodplain Information*** John Hays, CFM, Bill Beaver, Santa Cruz County
	2:30 to 3:00		***Private vs. Federal Flood Insurance. What You Should Know. What You Should Ask*** Bruce Bender, CFM, Bender Consulting Services, Inc.
	3:00 to 3:30		**Break**
	3:30 to 4:00		***A little Town that Could. Patagonia Arizona's Watershed Management Plan and Community Rating System*** Bill O'Brien, P.E., CFM, NextGen Engineering
	4:00 to 4:30		***Santa Barbara Fire and Debris Flows, a Public Perspective*** Linda Potter, P.E., CFM, Atkins
	4:30 to 5:00		TBD
Dinner 6:00 to 9:00			**Dinner and Silent Auction in the Madero-Canyon** Reception beginning at 6:00, no host bar, Dinner at 7:00

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Friday, November 9th

Sabino-Pima

7:00 to 8:00	**Board of Directors Meeting** in the Conference Room 223
7:00 to 8:30	**Breakfast Buffet** in the Madero-Canyon
8:30 to 9:00	***Updates from FEMA Region IX*** Ed Curtis, FEMA
9:00 to 9:30	***After the Fire: A Case Study from the July 19, 2017, Flood in Mayer, AZ*** Laurie T. Miller, P.E., VMA, LTM Engineering, Inc., Lynn Whitman, P.E., CFM, Yavapai County Flood Control District
9:30 to 10:00	***Three-dimensional Lagrangian Simulations Applied to Dam Hydraulic Structures*** Roberto Marivela, Ph.D., Dibble Engineering
10:00 to 10:30	**Break**
10:30 to 11:00	***My Summer Vacation - Stream Assessment Fieldwork in Alaska*** Geoff Brownell, P.E., CFM, Michael Baker International
11:00 to 11:30	***Re-Imagining Water in the Desert: Moving Toward Decentralized Regenerative Engineering*** Kieran Sikdar, CFM, Holistic Engineering and Land Management
11:30 to 12:00	***Arroyo Chico MultiUse Flood Control Project*** Janice Hughes, P.E., Jennifer Becker, Pima County Regional Flood Control District, Brian Kenny, U. S. Army Corps of Engineers
12:30 to 3:30	**Field Trip**

Field Trip: (2.5 CECs)

Arroyo Chico Flood Control Project with Recreation Basin

Tucson Drainage Area Project/Arroyo Chico, located in Tucson, AZ is an Army Corps of Engineers project sponsored by Pima County Regional Flood Control District.

The early 90's ACOE Feasibility Study went to construction in 1995 with the Phase 1 $11 Million Randolph South Detention Basins reconstructing the Randolph Golf Course, lowering the fairways into stormwater detention features.

Phase 2A, the $22 Million Cherry Field Multiuse Basin and Railroad Wash Confluence was completed in 2008. Cherry Field is an offline basin. The inlet structure overtops in events greater than the 18-year and has not filled since construction. New ball fields, locker rooms, and a maintenance building and parking area were constructed for Tucson Unified School District.

Phase 2B, the $11 Million Park Avenue Environmental Restoration Basins was completed in 2012, providing flood control benefits as well as ecosystem restoration/enhancement, recreation and other benefits. The project provides environmental restoration of degraded desert habitat and riparian ecosystem.

Phase 3 built the $4 million High School Wash storm drain improvements completed in 2015. The new storm drain reduces flooding around Tucson High School and the 4th Avenue business district.

The final phase, increment 3 Channel Improvements, is anticipated to be about $6 Million for construction and is in redesign to address Geotechnical issues and environmental concerns. The Arroyo Chico basins present three very different end uses for regional stormwater detention structures; golf course, school ball fields, and environmental restoration. Though it has removed more than 1,000 residential or business structures from mapped FEMA Special Flood Hazard Areas, the economic benefit to the county in flood hazard reduction is amplified by these every day uses for flood control structures.