

Arizona Floodplain Management Association Spring 2017 Conference



Quick Look: Conference Abstract

- ❖ Go to www.azfma.org to register
- ❖ You must be an AFMA member to register for the conference or classes
- ❖ Free Wednesday Training Classes
- ❖ Plenary, Technical, and Programs & Policies presentations
- ❖ Field tour of debris flow hazards in Southern Arizona
- ❖ CFM/Continuing Education Credits

May 17 – 19, 2017

Tucson, Arizona

Westward Look Wyndham Grand Resort & Spa

Conference Cost: \$350, Includes Thursday Dinner (Additional Dinner Guests: \$35)

245 East Ina Road, Tucson, AZ 85704



Photo courtesy of Westward Look

Note: Room rate of \$139 (plus taxes and fees) available at Westward Look Wyndham Grand Resort & Spa.

Reserve your room by calling (800)-722-2500 or via email at reservationstusgr@wyndham.com

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

Cutoff for guest room registration to receive the rate is April 25, 2017.

Attention CFMs! Conference has been pre-approved for CECs by ASFPM (Thursday conference 6 CECs, Friday conference 3 CECs) Workshop and field trip CECs – see descriptions for pre-approved CECs

Arizona Floodplain Management Association Spring 2017 Conference

Wednesday May 17th

Wednesday, May 17th Training Classes – Schedule of Events (See Descriptions of Classes for more information)

Room	Palm	Canyon	Desert
8:00 AM	Tour of Low Impact Development Construction Best Practices	Elevation Certificate Workshop	Building Public Support for Floodplain Management
8:30 AM			
9:00 AM			
9:30 AM			
10:00 AM			
10:30 AM			
11:00 AM			
11:30 AM			
Noon	<i>Lunch –Provided by AFMA (Sonoran Rooftop Patio)</i>		
12:30 PM			
1:00 PM	Application of PC-Hydro 6 to Calculate Flood Peaks from Small Semi-Arid Watersheds in Pima County, AZ	FLO-2D Urban and Storm Drain Modeling Workshop	CFM Exam (Must pre-register with ASFPM)
1:30 PM			
2:00 PM			
2:30 PM			
3:00 PM	Tools to Validate and Calibrate Hydrologic Models		
3:30 PM			
4:00 PM			
4:30 PM			
5:00 PM			
5:30 PM	<i>Evening Reception and Registration on the Palm Terrace (Appetizers and Cash Bar, Dinner on your own)</i>		
6:00 PM			
6:30 PM			
7:00 PM			

1:00 to 4:00 PM, CFM Exam (Located in Desert Room)



Arizona Floodplain Management Association Spring 2017 Conference

Description of Classes – Wednesday, May 17th

Tour of Low Impact Development Construction Best Practices (8:00 am - 11:00 pm, 3 CECs) Kieran Sikdar, CFM, Watershed Management Group

Watershed Management Group and Pima County Regional Flood Control District (PCRFCD) will present completed and/or in-progress Low Impact Development and water harvesting project sites. The tour will cover best practices for construction, management and lessons learned.

Application of PC-Hydro 6 to Calculate Flood Peaks from Small Semi-Arid Watersheds in Pima County, AZ (1:00 pm - 3:00 pm, 2 CECs) Janice Hughes, P.E., R.G., Evan Canfield, P.E., CFM, Pima County RFCD Ryan Stucki, P.E., LEED AP, Engineering and Environmental Consultants

The Recommended Application of the Pima County PC-HYDRO Program to Calculate Flood Peaks from Small Semi-Arid Watersheds in Pima County, Arizona

Tools to Validate and Calibrate Hydrologic Models (3:00 pm - 5:00pm, 2 CECs) Annjanette Dodd, PhD, P.E., Todd Cochran, P.E., Kimley-Horn and Associates

The sizing of flood control and drainage structures is often dependent on hydrologic design methods which rely on engineering judgement, resulting in an answer that is close to correct. Often, different studies result in different answers. How do you know your answer is close to correct or reasonable? We will share methods and tools, along with applied examples, that can be used to validate and calibrate hydrologic design flows.

Elevation Certificate Workshop (8:00 am – 12:00 pm, 4 CECs) Suzie Sarpong, Arizona Department of Water Resources

The Elevation Certificate is an administrative tool used by the National Flood Insurance Program (NFIP) to provide elevation information necessary to ensure compliance with the community's floodplain management regulations, to determine the proper insurance premium rate, or to support a request for a Letter of Map Amendment (LOMA) or a Letter of Map Revision, based on fill (LOMR-F). FEMA revises this form every three years. This presentation will review the requirements for completion of an Elevation Certificate, and also introduce the latest version of the Elevation Certificate, made available June 2016.

FLO-2D Urban and Storm Drain Modeling Workshop (1:00 pm to 5:00 pm, 4 CECs) Jimmy O'Brien, P.E., PhD, FLO-2D Software Inc., Noemi Gonzalez, PhD

FLO-2D software is now a fully integrated 2-D surface water and storm drain model that is specifically designed for urban flood routing. Extensive storm drain enhancements have been to the model in the last round of urban projects for the FCDMC. This class will provide an update for the storm drain component features and will introduce the new QGIS plug-in interface under development (free plug-in tool for the free QGIS software). Includes a mapping program.

Building Public Support for Floodplain Management (8:00 am to 12:00 pm, 4 CECs) Alisa Sauvageot, CFM

Floodplain managers often struggle with the political and public pressures related to permitting development and regulating floodplains. Building public understanding and support is vital to the success of floodplain management. This interactive course is presented as a toolkit for Floodplain Managers on how to achieve this goal.



Arizona Floodplain Management Association Spring 2017 Conference

Wednesday May 17th

Wednesday, May 17th Events

CFM Exam (1:00 pm to 5:00 pm, must pre-register with ASFPM) Located in the Desert Room.

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.

Note: Due to scheduling conflicts we will not conduct office hours with FEMA at this conference

Evening Reception and Registration (5:30 pm to 7:30 pm) On the Palm Terrace

Come register for the conference and join your fellow floodplain managers for an evening reception on the Pool Patio. Appetizers will be served and a cash bar will be available.

Wednesday Dinner – On your own.



-Photograph courtesy of Westwood Look



Arizona Floodplain Management Association Spring 2017 Conference

Thursday, May 18th

Plenary Session (Santa Catalina Ballroom)	7:00 to 8:00	<i>Breakfast on the Sonoran Rooftop Terrace</i>	
	8:00 to 8:30	Call to Order, Announcements, and Local Welcome	
	8:30 to 9:00	San Pedro River Recharge Network Update Cyrus D. Miller, P.E., CFM, JE Fuller Hydrology & Geomorphology Inc.	
	9:00 to 9:30	Dam Safety, Tempe Town Lake Waleed Aboshanp, Arizona Department of Water Resources	
	9:30 to 10:00	Concept Analysis for Floodplain Restoration in Altar Valley John Wallace, P.E., CFM, JE Fuller Hydrology & Geomorphology Inc.	
	10:00 to 10:30	Break (Santa Catalina Terrace)	
	10:30 to 11:00	Pima County's Section 10 Permit Julia Fonseca, Pima County, Sherry Ruther	
	11:00 to 11:45	Arid LID: Managing Stormwater for Peaks and Supply Kieran Sikdar, CFM, Watershed Management Group	
	11:45 to Noon	Business Meeting	
Noon to 1:30 Lunch - Provided by AFMA at the Sonoran Rooftop Terrace			
Afternoon Concurrent Sessions (Santa Catalina Ballroom)	Technical Track Saguaro & Ocotillo Room	1:30 to 2:00	Encroachment in a 2-D World John Wallace, P.E., CFM, JE Fuller Hydrology & Geomorphology Inc.
		2:00 to 2:30	Ryan Airfield LOMR – to FLO-2D or not to FLO-2D; that is the Question John Wise, P.E., CFM, ENV SP, Stantec Consulting Service Inc.
		2:30 to 3:00	Defining Storm Magnitude – A Case Study for September 8 th , 2014 Storm Jeff Holzmeister, P.E., Shimin Zou, P.E., CFM, PhD, J2 Engineering and Environmental Design
		3:00 to 3:30	<i>Break (Santa Catalina Terrace)</i>
		3:30 to 4:00	Stream Gage Data: Let's Use it! A Case Study in Alamo Wash, Tucson AZ Scott Altherr, P.E., CFM, CMG Drainage Engineering, Inc.
		4:00 to 4:30	Looking Beyond the Cross Section – The Integrated Hydrologic Data Collection Network Brandon Forbes, Hydrologist, U.S. Geological Survey
		4:30 to 5:00	Continuous Slope-Area Method Claire Bunch, U.S. Geological Survey
		Programs and Policies Track Cholla Room	1:30 to 2:00
	2:00 to 2:30		GIS Scripting to Enhance Public Notifications Lensa Kitilla, Atkins
	2:30 to 3:00		The What, Why, and Common Follow-up Issues related to Community Assistant Visits Suzie Sarpong, Arizona Department of Water Resources
	3:00 to 3:30		<i>Break (Santa Catalina Terrace)</i>
	3:30 to 4:00		Concepts for Improved Flood Response and Awareness for Municipalities Lance Webb, P.E., CFM, City of Mesa
	4:00 to 4:30		BUILDING Relationships Jon Ortman, CFM, Katherine Fish, CFM, Mohave County Flood Control District
	4:30 to 5:00		Conceptual Master Plan Addressing Flooding in Nogales, Arizona John Hays, CFM, Santa Cruz County
	Dinner 6:00 to 9:00		Dinner and Activities on the Sonoran Rooftop Terrace Reception beginning at 6:00, no host bar, Dinner at 7:00



Friday, May 19th

Santa Catalina Ballroom

Arizona Floodplain Management Association Spring 2017 Conference

7:00 to 8:00	Board of Directors Meeting in the Mesa Room
7:00 to 8:30	Breakfast Buffet on the Sonoran Rooftop Terrace
8:30 to 9:00	Using LiDAR to Assess Channel Maintenance Needs Terry Hendricks, CFM, Pima County Regional Flood Control District
9:00 to 9:30	New Technologies for Obtaining Topography and Mapping Joe Wagner, FCDMC, Leo Torres, AeroTech Mapping
9:30 to 10:00	SUAS-Based Aerial Survey Geoff DeBenedetto, US Geological Survey
10:00 to 10:30	<i>Break</i> (Santa Catalina Terrace)
10:30 to 11:15	Challenges in a Complex Urban Flooding Project: A Survival Guide for Modelers Jimmy O'Brien, P.E., PhD, Riada Engineering Corp., Noemi Gonzalez, PhD Hari Raghavan, P.E., PhD, Holistic Engineering and Land Management
11:15 to 11:45	FLO-2D Web Access Tool Update and GDS Replacement Project, Hussein M. Hussein, P.E., CFM Thomas R. Loomis, P.E., CFM, RLS, Flood Control District of Maricopa County
11:45 to 12:15	Debris Flow Hazards in Arizona Joseph Cook, Arizona Geological Survey
12:30 to 3:30	Field Trip – Debris Flow in Arizona

Field Trip: Debris Flow Hazards in Arizona (3 CECs)

For five days in late July 2006, the mountains of southern Arizona received unusually heavy rainfall. A final burst of precipitation on the morning of July 31st produced at least 433 hillslope failures in the Santa Catalina Mountains of Pima County. In the drainages near Sabino Canyon, these masses of unconsolidated soil, rock and vegetation coalesced into debris-flows that traveled to the mouths of several canyons. Access to Sabino Canyon was temporarily closed due to debris flows and flood damage, and Mt. Lemmon Highway was damaged in several places. At Soldier Canyon it appears that a debris flow passed through large culverts beneath Mt. Lemmon Highway and flowed about 0.5 miles farther downslope. A substantial amount of coarse sediment was deposited near the canyon mouth downstream of the highway, stopping just short of several houses. Flooding and sediment run-out from the debris flow did impact these houses, and water flooding spread into areas that had not been impacted by large floods in 1983 and 1993. Fortunately, the 2006 debris-flows did not result in any injuries. But there was considerable damage to some canyon roads, outbuildings and hiking trails. At Gibbon, Soldier, and Bird Canyons debris flows nearly reached or spilled out of canyon mouths. The 2006 debris-flows were much larger than any that had occurred historically in the Santa Catalina Mountains, raising new concerns about the potential for damage to roads and homes near many canyon mouths in the Catalina Foothills. The field trip will visit several sites affected by the 2006 debris flows along Catalina Highway at Soldier Canyon. We will also visit the mouth of Finger Rock Canyon to examine older generations of debris flow deposits and discuss potential hazards to nearby homes and infrastructure.

