



ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

Spring 2022 Conference

May 4 - 6, 2022

Wednesday - Friday

Tucson, Arizona

KEYNOTE SPEAKER SUZANNE SHIELDS

Pima County Regional Flood Control District

Suzanne's professional career includes over 40 years of floodplain management, holistic watershed management planning, flood control infrastructure design, and riparian habitat protection and restoration. Through Suzanne's passion and leadership, the Pima County Regional Flood Control District is one of the premier flood control agencies in the nation. Suzanne continues to dedicate herself to protecting the community where she was born and raised.



CONFERENCE COST: \$325

Includes Thursday Dinner
Additional Dinner Guests:
\$35

THE WESTIN LA PALOMA RESORT & SPA TUCSON

3800 East Sunrise Drive, Tucson, AZ 85718

Room rate of \$159 (plus taxes and fees)
available at the Westin La Paloma Resort &
Spa

Reserve your room by calling (520)-742-6000
or by clicking [This Link](#)

Identify yourself as part of the Arizona
Floodplain Management Association
Conference (AFMA)

Cutoff for guest room registration to receive
the rate is April 11, 2022

Attention CFMs: The conference is pending pre-approval for CECs by ASFPM
(Thursday conference 6 CECs, Friday conference 3 CECs)

Class and field trip CECs – see descriptions for the pending pre-approval CECs

ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

Spring 2022 Conference - Wednesday, May 4

SCHEDULE

MORNING CLASSES

FLOODPLAIN 101

8:00 - 12:00 Sonoran 1
AFMA Board Members

BASIC HEC-HMS TRAINING

8:00 - 12:00 Sonoran 2
Jeff Harris, P.H., WEST Consultants, Inc

BREAK
10:00 - 10:30

NATURE-BASED STRATEGIES FOR STORMWATER MANAGEMENT

9:00 - 11:30 Cottonwood Room
Jesse Westad, PLA, WERK | urban design, & Reynold Kraft, P.E., Holistic Engineering and Land Management, Inc.

Lunch - Vista Patio & Sunset Terrace 12:00 - 1:00

AFTERNOON CLASSES

INTRODUCTION TO STREAM BANK STABILITY ANALYSIS AND PROTECTION

1:00 - 5:00 Sonoran 1
Brent Travis, Ph.D., WEST Consultants, Inc.

BREAK
3:00 - 3:30

ADVANCED HEC-HMS TRAINING

1:00 - 5:00 Sonoran 2
Jeff Harris, P.H., WEST Consultants, Inc.

SPECIAL EVENTS

CERTIFIED FLOODPLAIN MANAGER (CFM) EXAM

1:00 - 4:00 Cottonwood Room
Must Pre-Register with ASFPM

FEMA & ADWR OFFICE HOURS

8:00 - 5:00 Ironwood Room
Michael Bishop, FEMA Region IX & Michael Shelton, ADWR

EVENING RECEPTION AND CONFERENCE REGISTRATION

5:30 - 7:30 Terrace Level Foyer
Appetizers and Cash Bar

Attention CFMs: See individual class descriptions for pending pre-approval CECs

ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

Spring 2022 Conference - Wednesday, May 4

CLASS DESCRIPTIONS

FLOODPLAIN 101

(8:00AM - 12:00PM, 3.5 CECS)

AFMA Board Members

Learn all of the requirements of administering FEMA floodplains, the basics of reading and interpreting published floodplain information, and community compliance for participating in the National Flood Insurance Program (NFIP). The specific requirements for local floodplain administrators will be covered, including permitting, violations, record keeping, and substantial damage and improvement.

NATURE-BASED STRATEGIES FOR STORMWATER MANAGEMENT

(9:00AM - 11:30 AM, 2 CECS)

Jesse Westad, PLA, WERK / urban design, & Reynold Kraft, P.E., Holistic Engineering and Land Management

The rapid urbanization of the arid southwest has led to an increase in drainage issues, the urban heat island effect, a decrease in nature, irresponsible building practices, as well as noise and air pollution. Now that these systems are already in place, how do we use nature to help mitigate these issues in the built environment? This class will focus on stormwater management methods using nature-based strategies. The class will present decentralized stormwater management philosophy and objectives and various BMPs that promote interrelated benefits.

BASIC HEC-HMS TRAINING

(8:00AM - 12:00PM, 3.5 CECS)

Jeff Harris, P.H., WEST Consultants, Inc.

This four-hour workshop will provide a general, condensed version of the 3-Day Basic HEC-HMS course. It covers the layout of HMS, building a basin model and basin model elements, GIS, Meteorologic models, routing, creating a computation and viewing results. It will also include two short, hands-on workshops to provide a basic feel for using the software. Participants should bring a laptop with HEC-HMS version 4.9 and HEC-DSSVue version 3.2 installed. Material for hands-on workshops will be provided. (Laptop Recommended).

ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

Spring 2022 Conference - Wednesday, May 4

CLASS DESCRIPTIONS

INTRODUCTION TO STREAM BANK STABILITY ANALYSIS AND PROTECTION

(1:00PM - 5:00PM, 3.5 CECS)

Brent Travis, Ph.D., WEST Consultants, Inc.

This four-hour course introduces the fundamentals of stream bank stability analysis and protection from failures. It is a hands-on course, and so attendees are encouraged to bring laptops or calculators, although it is not critical. Specific course topics are: (1) Introduction to geomorphology, (2) Basics of grade control, (3) Redirective methods, (4) Resistive methods, (5) Overview of 2D limit equilibrium analysis, and (6) Introduction to scour analysis. By the end of the course, each student should have:

- Learned and applied basic erosion hazard setback, 2D limit equilibrium, and scour analyses to describe the existing conditions at actual sites.
- Learned and applied basic remediation strategies including grade control, redirective measures, and resistive measures at actual sites.
- Learned numerous basic scour analysis methods and how best applied to given conditions.

There are many techniques and perspectives on all of the topics that will be covered. The overarching goal of this course is for each student to gain basic but practical and applicable skills in each area by means of lecture, discussion, and direct computational experience.

ADVANCED HEC-HMS TRAINING

(1:00PM - 5:00PM, 3.5 CECS)

Jeff Harris, P.H., WEST Consultants, Inc.

This four-hour workshop will provide a general discussion on a variety of topics which are not part of the Basic HEC-HMS workshop. Topics include 2D-Transform, Reservoir modeling, Forecasting, Optimization, Hypothetical storms, Depth Area Analysis, and other topics. It will also include two short, hands-on workshops to provide a basic feel for using some advanced features. Participants should bring a laptop with HEC-HMS version 4.9 and HEC-DSSVue version 3.2 installed. Material for hands-on workshops will be provided. (Laptop Recommended).

ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

Spring 2022 Conference

EVENT DESCRIPTIONS

CFM Exam - Wednesday, May 4, 1:00p - 4:00p

Cottonwood Room

The ASFPM Certified Floodplain Manager (CFM) exam will be proctored.

To take the exam, you must pre-register through ASFPM.

Please see the link below for more information:

[ASFPM CFM Application](#)



FEMA & ADWR Office Hours - Wednesday, May 4, 8:00a - 5:00p

Ironwood Room

Schedule a time to meet with Michael Bishop from FEMA Region IX and Mike Shelton from ADWR to discuss Risk MAP, current or future engineering studies, levees, or other issues in your community.

Contact Mike Shelton at ADWR to schedule an appointment.

meshelton@azwater.gov

or 602-771-8428.



FEMA



Evening Reception & Registration - Wednesday, May 4, 5:30p - 7:30p

Terrace Level Foyer

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 Night Dinner is On Your Own



Evening Reception and Dinner + Raffle and Silent Auction, Thursday May 5, 6:00p - 9:00p

Fiesta Area

The night will begin with a reception and cash bar.

The plated dinner will be served at 7:00p.

Raffle tickets will be sold before and during dinner with a prize and gift card drawing

at the end of the night. The silent auction bidding will be open all day Thursday until dinner begins.

We are in need of donations for the silent auction. Unique and thoughtful items are all welcome.

Silent auction items may be dropped off with Ryan Sauer at Entellus at:

3033 N. 44th St, Ste 250, Phoenix, AZ 84018 or brought to registration.

Contact Ryan Sauer at rsauer@entellus.com or (602)-889-4456 for questions and more information.

All raffle and silent auction proceeds go directly to the AFMA Scholarship Fund.



ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

Spring 2022 Conference - Thursday, May 5

SCHEDULE

Breakfast - Canyon Ballroom 7:00 - 8:00

| | | |
|---------------|---------------|--|
| Canyon I, III | 8:00 - 8:05 | Call to Order |
| | 8:05 - 8:15 | Local Welcome Carmine Debonis, Jr., Deputy County Administrator for Public Works at Pima County |
| | 8:15 - 9:45 | Pima County Over The Years Suzanne Shields, Director of Pima County Regional Flood Control District |
| | 9:45 - 10:15 | Break |
| | 10:15 - 10:30 | Honoring New AFMA Lifetime Memberships |
| | 10:30 - 11:30 | Santa Cruz River Management Plan for the Effluent-Dependent Reach Evan Canfield, P.E., CFM, Ph.D., Pima County Regional Flood Control District & Scott Altherr, P.E., CFM, CMG Drainage Engineering, Inc. |
| | 11:30 - 12:00 | Climate Change Impact on Stormwater Infrastructure in Tucson, AZ Bill O'Brien, P.E., CFM, QSD, & Erfan Tousi, CFM, PhD, NextGen Engineering, Inc. |
| | 12:00 - 12:15 | AFMA Business Meeting |

Lunch - Sonoran Room 12:15 - 1:30

| | | |
|----------------------|-------------|---|
| Technical - Canyon I | 1:30 - 2:00 | Wishing for a Merry Christmas: a Feasibility Study of Christmas Wash Zach Whitten, P.E., & Todd Ramsey, Stantec |
| | 2:00 - 2:30 | Climate Change Impacts on Flooding in the Sabino Canyon Watershed in Tucson, AZ Bill O'Brien, P.E., CFM, QSD, Erfan Tousi, CFM, PhD, & Tariq Tariq, EIT, NextGen Engineering, Inc. |
| | 2:30 - 3:00 | Floodway Delineation Using HEC-RAS2D Cyrus D. Miller, P.E., CFM, JE Fuller Hydrology and Geomorphology, Inc. |
| | 3:00 - 3:30 | Break |
| | 3:30 - 4:00 | Santa Cruz River Corazon Reach Stream Restoration Kevin Payne, P.E., CFM, Will Wilhelm, P.E., CFM, Kimley-Horn, & Jacob Prietto, CFM, Pima County Regional Flood Control District |
| | 4:00 - 4:30 | What To Do When Your Grade Control Structures Blow Out Paul Baughman, P.E., CFM, Mohave County |
| | | |

| | | |
|----------------------------------|-------------|--|
| Programs & Policies - Canyon III | 1:30 - 2:00 | Santa Cruz County - Sponge County Initiative John Hays, CFM, MOLO, PMP, Santa Cruz County |
| | 2:00 - 2:30 | Urban Stormwater Mitigation: A Decentralized Approach Exercising Public-Public-Private Partnerships Jacob Prietto, CFM, Pima County Regional Flood Control District |
| | 2:30 - 3:00 | 2D Modeling Updates Linda Potter, P.E., CFM, Atkins |
| | 3:00 - 3:30 | Break |
| | 3:30 - 4:00 | School Outreach Jon Ortman, CFM, Mohave County |
| | 4:00 - 4:30 | Success with CRS Greg Saxe, Ph.D., MRP, Pima County Regional Flood Control District |
| | | |

Evening Reception & Dinner - Fiesta Area 6:00 - 9:00

ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION

Spring 2022 Conference - Friday, May 6

SCHEDULE

Breakfast - Canyon Foyer 7:00 - 8:30

Canyon I, III

- | | |
|---------------|---|
| 8:30 - 9:00 | Everything You Always Wanted to Know About LiDAR (But Were Afraid to Ask) <i>Zachary Radel, CMS - UAV, Cooper Aerial Surveys Co.</i> |
| 9:00 - 9:30 | Massingale Retention Basin Multipurpose Benefits Evaluation <i>Eleonora Demaria, Ph.D., Pima County Regional Flood Control District, Gregory Bambauer, P.E., & Peng Zhang, P.E., WSP</i> |
| 9:30 - 10:00 | ADOT Grand Canyon National Park Airport Drainage Master Plan & Water Use Study <i>Bob Haneline, P.E., Dibble</i> |
| 10:00 - 10:30 | Break |
| 10:30 - 11:00 | Mandan Street Drainage Improvement Project <i>Dan Frank, P.E., Flood Control District of Maricopa County</i> |
| 11:00 - 11:30 | Understanding Map Changes and More in a Risk Rating 2.0 World <i>Bruce Bender, CFM, Bender Consulting Services, Inc.</i> |
| 11:30 - 12:00 | El Rio Preserve Bank Protection Virtual Construction Tech Tour <i>Deirdre Brosnihan, P.E., Pima County Regional Flood Control District</i> |
| 11:45 - 12:30 | Box Lunches To Go |
| 12:30 - 3:00 | El Rio Preserve and Los Morteros Area Field Trip |

El Rio Preserve and Los Morteros Area Field Trip (1.5 CECs)

Please join us from 12:30 PM to 3 PM for a series of tours looking at the El Rio Preserve, El Rio Preserve Bank Protection Project, and the Los Morteros cultural resources conservation area. Please remember to bring water, wear comfortable shoes, and wear appropriate sun protection.

Presenters:

Jim Conroy, Director,
Town of Marana Parks and Recreation Department

Deirdre Brosnihan, Engineering Division Manager,
Pima County Regional Flood Control District

Cannon Daughtrey, Archeologist,
Paleo West

Meeting Location:

El Rio Preserve Parking Area
10190 N Coachline Blvd,
Tucson, AZ 85743

The parking area has a portable toilet
and ramada with seating.



The map displays a route from El Rio Preserve to The Westin La Paloma Resort & Spa. The route is highlighted in blue and includes three segments with estimated travel times and distances:

- Segment 1: 30 min / 16.9 miles
- Segment 2: 30 min / 17 miles
- Segment 3: 34 min / 20.9 miles

The map also shows various landmarks, including the University of Arizona, Tucson Botanical Gardens, and the Tucson Mountain Park.