2019 FLOODPLAIN MANAGEMENT ASSOCIATION
PLENARIES, KEYNOTE AND PANELS
PLENARY I:

Understanding and predicting atmospheric rivers and west coast flooding:
Recent developments in science, observations, forecasting, decision support and policy

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UC San Diego’s Scripps Institution of Oceanography, La Jolla, California

Keynote presentation
Floodplain Management Association Annual Meeting, San Diego, California, 4 September 2019

The last few years have seen many advances in understanding the causes of flooding in the U.S. west coast states, and of forecast challenges associated with predicting them. This presentation summarizes key recent developments and describes how they represent a major push supporting flood risk management in the region. This push represents a 21st Century, west-coast version of efforts elsewhere to address other major weather hazards. It supports FMA’s Conference Theme - “Knowledge is Power: Keeping the lights on floodplains, resilience planning, and risk reduction”.

Case studies, from the last few years and analysis of nearly 40 years of FEMA flood claims will illustrate the challenges of west-coast flood prediction. One of the physical causes of forecast errors will be described – mesoscale frontal waves and their modulation of AR landfall position and duration. New tools to address these skill gaps are under development, or are already in place. These include an AR forecasting toolkit, a regional weather prediction model - “West-WRF,” and “AR Recon” - a new monitoring method being developed to measure ARs and their precursors offshore using weather reconnaissance aircraft. A scale for ARs, to be launched this winter, is designed to distinguish largely beneficial ARs from those that represent the greatest hazards.

Finally, organizational and policy developments supporting research for better AR prediction, and for use of such forecasts in flood and water supply applications, have also emerged in the last few years. Specifically, Forecast-Informed Reservoir Operations (FIRO), California’s “Atmospheric River Research, Mitigation and Climate Forecasting Program,” and creation of CW3E. This new Center, launched in 2014, represents a critical mass of technical capabilities (and serves as a nexus of supporting partnerships) that collaborated with water agencies to launch many of these initiatives and now carries out much of the work, with the help of a network of talented partners across the region, and nation.

PLENARY II: 2019 State Flood Risk Symposium Report Out
Moderator:
The State of California was selected by ASFPM to host a Flood Risk Management symposium, which was held in April at the Cal OES Headquarters in Rancho Cordova. This event was hosted by the Floodplain Management Association (FMA) and the Association of State Floodplain Managers (ASFPM) Foundation. The location of ASFPM Foundations’ annual symposium is competitive; and this was the first one in California. The intent of the one-day symposium was to delve deeper into key topics found at chapter
floodplain management conferences and results in a white paper documenting the findings. Selected experts convened in an open-discussion, think-tank type environment to explore the program and policy implications of "The Differing California Flood Disasters", including emergency response to levee breaches, flood/alluvial fan/mudflow hazards, and the flood/dam nexus. The objective was to identify solutions to reduce flood damages across California based on collaborative input from subject matter experts and decision members.

This idea of state/chapter Flood Risk Management symposiums is a follow-on from the ASFPM Foundation’s national Flood Risk Symposia and Forum, where 100 national and international experts and leaders convened over a decade through a series of three events: Symposium 1 on September 16, 2004, addressed "Defining and Measuring Flood Risk and Floodplain Resources;" Symposium 2 on November 4, 2009, explored "Flood Risk Perception, Communication, and Behavior;" and the 3rd Gilbert F. White Forum was held in March 2010 at George Washington University. Its goal was to facilitate discussion on the topic of flood risk to establish priorities for improving policy and program implementation and to formulate recommendations and directions for the future.

The development of such a program at the state level is designed to develop meaningful indicators to measure progress in flood risk management at the state/chapter level. A summary of the principal findings and recommendations growing out of the ASFPM Foundation events are available to guide after-action reports and to serve as a record of the thinking of policy experts at this time.

The notes from the breakout session at the California Symposium discussing "The Differing California Flood Disasters" are being reviewed and the main idea put into a white paper that can be used to shape future flood management in the State of California. Please join us to hear about these findings.

Panelists: ASFPM Representative
Jeremy Lancaster, PG, CEG, California Geological Survey
Brian Brown, PE, CFM, MBK Engineers
George Booth, PE, CFM, Sacramento County

KEYNOTE FOR AWARDS LUNCHEON
Speaker: Colonel Barta, USACE

Sustainability and Development
Moderator:
2019. California is humming, and so is the weather. Gavin Newsom, Governor of California, has made it clear that he intends to oversee construction of more housing as part of his "California for All" agenda, including Executive Order N-06-19, meant to spur the development of affordable housing on excess state land. Meanwhile California's drought is over (for now), with a snowpack at 161% of normal as of April 1, 2019 - and nervous flood risk managers hope the state doesn't get a "pineapple express" that melts all of that snow in a week. All while wildfires continue to ravage the state, creating both an immediate danger of fire & smoke damage AND, by altering landscapes & watersheds, a multi-year flood-after-fire risk.
We live in interesting times.

And most scientists say it's only going to get worse. More and more community development professionals - including us flood-risk managers - are using words like "sustainability" and "resiliency." But what does sustainable mean in the face of constant change? In regions that are largely built out, with more NIMBYs than available development sites, and housing affordability at an all-time low? With hazards projected to become more frequent and more damaging - and the projections themselves becoming more uncertain?

Come find out.

**Beneficial Uses of Floodplains in Impaired Watersheds**

**Moderator:** Alex Yescas, HDR Engineering, Inc., Vice-Chair, Floodplain Management Association

Natural floodplains provide flood risk reduction benefits by slowing runoff and storing flood water. They also provide other benefits of considerable economic, social, and environmental value that are often overlooked when local land-use decisions are made. Floodplains recharge groundwater and convey flows. Floodplains are also important for the supply and quality of water. The floodplain helps maintain water quality through filtration of impurities and processing of organic waste. When inundated with water, floodplains act as natural filters, removing excess sediment and nutrients, which can degrade water quality and increase treatment costs. The list of benefits provided by floodplains could go on to include many other historical, economic, scientific and recreational uses. In this panel, we will discuss a few San Diego watersheds that are impaired by certain constituents of pollution and efforts that are being carried out to improve the watersheds. The panel will include speakers from the City of San Diego, County of San Diego, and the San Diego River Park Foundation.

**Integrating Silos to Build Regional Water Resilience – Discussing Grants, Technical and Policy Assistance**

**Moderator:** Maria Lorenzo-Lee, CFM, California DWR

**Flood-MAR – Strategies for Integrating Flood and Groundwater Management**

**Moderator:**

Loss of floodplains, aging infrastructure, deferred maintenance, and climate change have intensified the flood risk to people and property. Water management strategies that integrate flood and groundwater management, such as using floodwaters for managed aquifer recharge (i.e., Flood-MAR), can help reduce flood risk. Flood-MAR projects that divert flood flows into irrigation canals or onto large swaths of land, incorporate reservoir reoperation strategies, or expand floodplains or flood bypasses can increase water supply reliability, reduce flood risk, enhance ecosystems, and achieve other potential benefits. Example Flood-MAR strategies that promote flood risk reduction include:
1. Taking water off the channel during high-flow events (i.e., skimming peak flows) and purposefully delivering water to irrigation canals or lands (through flooding or irrigation) to promote groundwater infiltration. This methodology requires flexibility and access to significant land area to achieve flood-risk reduction benefits downstream of diversion points.

2. Lowering reservoir storage levels prior to, during, or after the flood season or discrete events, to vacate reservoir storage before anticipated precipitation/snowmelt, which can reduce flood risks below the reservoir. The vacated water is conveyed to specific areas for managed aquifer recharge.

3. Slowing runoff from properties to encourage groundwater infiltration on public and private lands and reduce runoff from entering already swollen channels. Flood-MAR projects can be utilized on floodplains and expanded flood bypasses to further reduce flood risk and increase groundwater recharge potential, as well as provide ecosystem benefits and potentially reconnect floodplains.

Potential Speakers

1. Phil Destoff, General Manager, Consolidated Irrigation – Integrating flood and groundwater management in responding to 2017 flood events in the Tulare Lake Region
2. Jon Herman, [title], UC Davis – FIRO-MAR
3. Ric Ortega, General Manager, Grasslands Irrigation District – Floodplain habitat restoration and adaptive management
4. David Arrate, Senior Engineer, DWR – Merced Reconnaissance Study (potential flood risk reduction benefits from above Flood-MAR strategies in the Merced River Basin)

Overlooked, Big, and Growing: Urban Flood Risks

Moderator: Betty Andrews, ESA Associates

Areas with dense population, whether major metropolitan areas or smaller communities, typically share some common factors that elevate their flood risk: radical alteration of the natural drainage system, stormwater systems sized for modest rainfall events, flood risks that remain unmapped and unrecognized from a regulatory perspective, and risks that are growing in response to climate change, all combined with the elevated assets and life risk considerations typical of densely-populated areas. How significant is this challenge, and what measures and strategies might be necessary to address it as climate change continues to drive the variability and intensity of storm events in the future? This panel will assemble experts on the issue from academia, local communities, and the insurance industry for a framing of the problem and a lively discussion about what can be done to respond to it.

-- Sam Brody, Texas A&M (invited)
-- Dave Evans, Milliman
-- Erika Powell, PE, County of San Mateo
-- Lynette Cardoch, Moffat & Nichol

\[ \text{Mitigation } f(S) + \text{ Adaptation } f(i) \text{ - Threshold } f(t) = \text{ Resilience } f(☺); \text{ if } <0 = \text{ Suffering } f(☹) \]

Moderator: Vince Geronimo, PE, CFM; Mead & Hunt, Water Resources Market Leader

To be resilient from coastal flood damage, measures are taken to mitigate the potential impact of flooding, the vulnerability of people and property, and the consequences that result from a flood event. Investment in adaptation is necessary to maintain coastal resiliency as the magnitude of flood risk increases with Sea Level Rise. Anything less would result in a deteriorating coast and suffering by those...
that enjoy the benefits and resources offered along our coast. Our panelist will explore each of the functions that make up our equation and discuss the resource balancing required to prevent potential suffering faced by coastal communities. **Mitigation** as a function of current costs \( f(\$) \); **Adaptation** as a function of investment \( f(i) \); Flood Risk **Threshold** as a function of a changing climate over time \( f(t) \); and **Resilience** as a function of a community’s health, happiness, and well-being.

- **Thresholds** \( f(t) \) – Speaker #1... FEMA, CA Coastal Commission, USGS, CHARG
- **Mitigation** \( f(\$) \) – Speaker #2... Local community Coastal Floodplain Manager, DWR
- **Adaptation** \( f(i) \) – Speaker #3... USACE, TNC, Local project, SIO, consultant
- **Resilience** \( f(\text{😊}) \) – Speaker #4... NOAA, SCC,

**FMA COASTAL ISSUES COMMITTEE MEETING**

**Moderator:** Vince Geronimo, PE, CFM

The FMA Coastal Issues Committee (CIC) meets annually to foster communication and dialogue and strengthen working relationships among the professionals engaged in managing and/or protecting coastal floodplains and resources. The CIC meeting is an interactive opportunity for participants to collaborate on emerging coastal issues, share coastal information, resources, and educational opportunities, and discuss technical concerns or other critical coastal flood risk and floodplain management issues. This year’s CIC meeting will host Laura Engeman, Center for Climate Change Impacts and Adaptation, UCSD Scripps Institution of Oceanography who will present on Scripps’ Flood Warning System for Imperial Beach, one of the Center’s Resilient Futures projects.

The CIC has also invited representatives from local, regional, state and Federal agencies to provide updates on their coastal program or services milestones, provide policy reminders, or share information on upcoming meetings and events. Come be part of this interactive FMA committee meeting.

Join us at 2:30 on Wednesday, after the Awards Luncheon. All are welcome.

**Dam Safety Discussion Continued – Where are we now and where do we go from here?**

**Moderator:** Martin Teal, WEST Consultants, Inc.

Following a robust discussion at the 2018 FMA Conference in Reno, NV, we are inviting our speakers back to give us an update on Dam Safety Programs in CA, NV and HI. Updates will include a status report on the Dam Inundation Mapping and Emergency Action Plan submittals and reviews, as well as any new or pending dam safety regulations. Invited speakers include:

- Jose Lara, Dam Safety Planning Division, CalOES
- Sharon Tapia, Division of Safety of Dams, Chief, California DWR (invited)
- Laura Curvey, Senior Emergency Services Coordinator, San Diego County OES
- Bill White, Manager of Security & Emergency Planning, City of San Diego Public Utilities Department

**Research Needs for Improving Sub-seasonal to Seasonal (S2S) Precipitation Forecasting**

**Moderator:** Jeanine Jones, California DWR

Reauthorization of the Weather Research Act in 2019 bolstered the charge to NOAA to take actions to improve sub-seasonal to seasonal (S2S) precipitation forecasts, forecasts with lead times of weeks to months. Improved S2S forecasting would support a variety of water resources management decisions, from forecast-informed reservoir operations to planning for water transfers and groundwater recharge. DWR has
already been investing in research intended to lay the groundwork for making progress for California on this scientifically challenging subject. There is no silver bullet for improving forecasts – research investments and progress are required in observations, modeling, data assimilation in models, and access to high-performance computing capacity. This panel will describe some of the activities contributing to forecasting improvements.

State of the climate – Weather Research Act implementation, overview of DWR’s S2S forecasting investments, potential future directions – Jeanine Jones, DWR
DWR-NOAA project for Weeks 1-4 weather modeling improvements – Mike Anderson, DWR
Analysis of skill of experimental Week 3 forecasts for DWR, 2019 Russian River flood case study – Mike DeFlorio, Scripps
Ocean observations & monitoring supporting weather & climate forecasting – Bruce Cornuelle, Scripps (invited)

Fires to Flood Panel Presentations and Discussion
Moderator: Following one of the driest years on record for southern California during 2017-18, several major wildfires erupted during the summer of 2018. There were 2 particular wildfires that burned thousands of acres of dry old fuel across steep terrain named the Cranston and Holy fires. While most properties and structures were miraculously saved during the raging wildfires, the steep slopes were left with severe burns deep into the soil leaving behind only ash and silt. Once the fires were under control, the focus in mid-August 2018 turned to assessing the burn scar severity and understanding the potential for debris flows. The Holy fire scar was a particular concern due to the proximity of hundreds of homes and several schools downstream of numerous major drainages from the Santa Ana mountains. The Cranston fire spared the town of Idyllwild due to fire-fighting efforts, but left the bare slopes susceptible to debris flows that could wash out state highways 74 and 243 as well as campgrounds at Lake Hemet. Plans for immediate mitigation efforts were developed by joint-agencies and numerous meetings were held to develop a strategy for public outreach and emergency notification including mapping of affected areas and potential evacuation zones. A panel of experts from county, state and federal agencies will present and discuss the emergency management efforts, challenges and successes from post-wildfire assessment, debris flow prediction and mitigation, as well as public educational outreach and announcements.

Floodplain Management and Endangered Species
Moderator: Gregor Blackburn, FEMA
On May 25, 2018, a Record of Decision was signed announcing FEMA’s intent to implement the Preferred Alternative from the NFIP Final Nationwide Programmatic Environmental Impact Statement. This Preferred Alternative includes proposed program modifications to demonstrate compliance with the Endangered Species Act. FEMA is currently developing the necessary policies and processes for demonstration of NFIP compliance with the ESA. What is the ESA and what are its requirements? How does ESA compliance relate to the NFIP? Join us for a discussion on the ESA and how it overlaps with the NFIP.
Panelists:
   Gregor Blackburn, Floodplain Management & Insurance Branch Chief, FEMA Region IX
   Julia Gillespie, Environmental Protection Specialist, FEMA Region IX
   Andrea Clark, Downey Brand LLP
   Daven Patel, PE, CFM, STARR II
Planning for your Community’s Flood Risk
**Moderator:** Alison Kearns, FEMA

Knowing your community’s flood risk and taking action to reduce that risk are two very different things. How do you bridge the gap between having hazard information, then using it make your community more resilient? The answer is planning. Whether it’s your hazard mitigation plan, floodplain management plan, or comprehensive plan, these documents provide a mechanism to systematically address hazards in your community and develop implementable projects. In the session, hear tips from risk analysts and planners on how to plan effectively for your flood risk.

Financing Mitigation
**Moderator:** Alison Kearns

Everyone knows that mitigation, when done well, works. A recent study from the National Institute of Building Sciences states that for every dollar spent on mitigation, six are saved in the long run. However, these projects can be costly and when funding in your community is already stretched thin, how do you justify spending funds on something that might not show its worth for years? There are federal and state grants, but they often require a local match. Hear from this panel on creative ways to finance mitigation in your community and tips for implementing resilience.

Encampments on Flood Control
**Moderator:** Sara Agahi, County of San Diego

Panel discussion on encampments in Flood Control facilities including engineered structures, natural channels, and associated open spaces. Panelists will discuss their experiences, challenges, and lessons learned in dealing with encampments in their jurisdictions’ flood control facilities, as well as the public health and safety considerations.

**Panelists:**
1. Kevin Onuma, Deputy Director Operations and Maintenance, Orange County, CA
2. Jon Frye, Flood Control Engineering Manager, Santa Barbara County, CA
3. Abby Mayrena, Principal Engineer, Clark County, Nevada
4. Susan Bower, Assistant Director Integrative Services, San Diego County, CA
5. Kevin King, General Manager Reclamation District No. 1000, Sacramento, CA

Headwaters to Floodplain: Flood Safety Partnership
**Moderator:** David Pesavento, California DWR

Headwaters to Floodplains: Flood Safety Partnership was developed by DWR in response to recent legislation and to unify multiple government agencies’ flood safety efforts. The efforts will be generally grouped into three categories, Upper Watershed, Dam Safety and Reservoir Operations, and Floodplains. Please join us at this panel to learn more how DWR will be collaborating with other agencies and dam owners to help determine and disseminate information about flood risks. This panel will discuss specifics about how DWR will work with partners to gather and analyze data as well as provide technical assistance.

LEGAL PANEL: Fundamentals of Flood Management Law and Liability
**Moderator:** Andrea Clark, Downey Brand LLP

As floodplain managers engage in resilience planning and reduction of risks associated with floodplains, applicable laws and liability play an important role, particularly in light of our changing climate and resulting changes in hydrological patterns. This panel will offer some basics on flood management law
(federal, state and local) as well as a summary of liability issues associated with flood projects, drainage, and dams.

Scott Shapiro, Downey Brand LLP
Jit Dua, Central Valley Flood Protection Board - invited
Gary Bardini, SAFCA - invited
Other speaker TBD

6 Months Post-Disaster, Now What? Interagency Coordination for Long-Term Disaster Recovery

Moderator:
Disaster recovery can take months or even years, long after the emergency response has completed. However, often there is state and federal involvement to support long-term recovery for communities after a disaster. Over the past few years, the Federal Emergency Management Agency (FEMA) focused on development of the National Disaster Recovery Framework (NDRF) and pre-disaster recovery guidance for state and local governments. The California Disaster Recovery Framework (CDRF) builds on the State’s experience and current recovery documents and guidance. This panel will give information about the state and federal frameworks, will provide examples from recent long-term recovery efforts, including Butte County recovery after the Camp Fire, and will describe the role of state and federal agencies in recovery.

Floodplain Management and Science for the Next Generation: Investing in Our Future Decision Makers

Moderator: Hunter Merritt, USACE Sacramento District
The old investment adage of "buy low, sell high" can apply to our investment in outreach, as well. Water resource professionals are aware of the need for outreach and education and promoting awareness of floodplain management issues. But are these efforts part of our core mission, or are just catchphrases? We may be throwing good money after bad in shortsighted, scattered fashion, when we could be strategically maximizing the return on our investments by reaching the decision makers of the future, where they live today, teaching them about the flood problems they are about to inherit, so they can be informed and empowered to act in their own communities.

This panel will focus on ways that communicators are addressing the knowledge gap of students, and teachers, raising awareness of flood risk and heightening the understanding of the natural processes of floodplains. Participants will leave this session with a better understanding of the ways K-12 teachers in California are accomplishing the goals of Next Generation Science Standards (NGSS), and adopting a framework for applying real-world concepts and phenomena to the curriculum. Ideas for constructive relationship-building across the gap between floodplain professionals and the teaching professionals of our future voters will be shared.

- Crystal Howe, San Diego County Office of Education, CREEC Coordinator
- Phillip Dixon, NRCS Envirothon Coordinator
- TBD (STEM professional)

The Evolution of Flood Insurance

A Look at Private Flood Insurance and The NFIP’s Risk Rating 2.0
While the reform legislation of 2012 and 2014 provided FEMA direction to improve the financial stability of the NFIP, it—along with newer technology—also helped trigger the growth of the private flood insurance market. But this advancement in technology has also allowed FEMA to take a new and simpler approach to how federal flood insurance will be rated in the near future.

This session will first provide a look at the current private flood insurance market and what floodplain managers and others should know and be aware of. Then next will be an update by FEMA on Risk Rating 2.0 followed by an open Q&A session.

With a lot of buzz in the air about private flood insurance and Risk Rating 2.0, you don't want to miss this opportunity to learn the latest.

Bruce A. Bender, CFM – Bender Consulting/ASFPM Insurance Committee Co-Chair
Tony Hake – Product Service Delivery Division Director, FIMA

Flood Control Financing Innovation – A Multi-Jurisdictional Approach to Finance and Implementation
Moderator: Seth Wurzel, CGFM, Principal, Larsen Wurzel & Associates, Inc.
With the support of multiple bond measures over the last two decades, California continues taking on flood control in the Central Valley and local agencies are leading the way. Flood risk reduction involves coordination with many public agencies at all levels of government, and implementing a program to finance and build a system requires creating a framework to engage all stakeholders to agree on a long-term course of action. This session presents the approach the Cities of Stockton, Lathrop and Manteca and San Joaquin County are currently advancing to provide 200-Year flood protection in the Mossdale Tract Area of the County. These agencies re-formed the San Joaquin Area Flood Control Agency (SJAFCA) in early 2018 to facilitate the financing and implementation of needed flood control improvements with the goal of providing an Urban Level of Flood Protection to the area. The agencies are currently advancing an integrated financial plan consisting of a development impact fee program, a new special benefit assessment district and tax increment financing through, what could be the first multi-jurisdictional Enhanced Infrastructure Financing District (EIFD) in California. The panel will present and discuss this real time case study currently underway.

Constantine C. Baranoff, Shareholder Kronick Moskovitz Tiedemann & Girard (KMTG)
Jamie Gomes, MBA, Managing Principal at Economic & Planning Systems, Inc. (EPS)
Fritz Buchman, PE, Deputy Public Works Director, County of San Joaquin
Chris Elias, Executive Director, San Joaquin Area Flood Control Agency

Challenge Model - Report Session
FMA Modeling and Mapping Committee will report on the 2019 Challenge Models. Analysis Results will be compared. The range of solutions used to solve the Challenges will be discussed, and insights into how and why the challenges were presented this year in a Virtual Environment will be discussed. New insights and possible solutions to some of the original FEMA 46 issues of 2D modeling will be discussed, based on the issues raised in the Challenge Modeling for 2019 and 2012. A presentation will be given by
the attending members of the FMA Modeling and Mapping Committee with the addition of a few invited Technical Partners which will make up the Panel for the Question and Answer portion.

**Challenge Models - Modern Analytical Techniques Panel**
**Hosted by:** FMA Modeling and Mapping Committee.
Short presentations on the computational capabilities of remote computing, virtual computing and cloud computing will be made by panelists. The panelists will relate how these modern capabilities can currently be used by our industry and what may be on the horizon, as our industry moves towards big data computing. A discussion of what needs to change to make this possible. Panel will consist of Datacate Technical personnel (the data center that hosted the 2019 Challenge Models), several industry software vendors, and a limited number of modelers from the 2019 Challenge.

**CALIFORNIA DEPARTMENT OF WATER RESOURCES FLOODPLAIN MANAGEMENT REVIEW COURSE**
(No CECs For This Course)
(No CECs for this workshop)
This full-day workshop reviews floodplain management concepts, practices, and regulations and is intended for those individuals preparing for the Certified Floodplain Manager (CFM) exam. The CFM examination is a patented certification by the Association of State Floodplain Managers (ASFPM) focused primarily on FEMA’s National Flood Insurance Program. Note: If you are not a full conference attendee, and would like to attend this workshop, the one-day FMA Conference fees apply. If you wish to take the CFM examination, you must register separately with ASFPM at [http://floods.org](http://floods.org) at least 3 weeks prior to the examination (fees apply). The CFM examination is scheduled for Wednesday, September 4, at 8:30 a.m. at this Conference. Doors open at 8:00 am.

**Instructors:** Ray Lee, CA Department of Water Resources  
Salomon Miranda, CA Department of Water Resources  
Michael Ward, CA Department of Water Resources  
Robert Lampa, CA Department of Water Resources  
Daniel Burgett, CA Department of Water Resources

**Wednesday, September 4, 2019**
**Certified Floodplain Manager (CFM) Examination**
If you wish to take the CFM examination, you must register separately with the Association of State Floodplain Managers at [http://floods.org](http://floods.org) at least 3 weeks prior to the examination (fees apply). The Certified Floodplain Manager examination is scheduled for Wednesday, September 4, at 8:30 a.m. at this Conference. Doors open at 8:00 am.

**Exam Proctors:** Garret Tam Sing, CA Department of Water Resources  
Raul Barba, CA Department of Water Resources
OPEN FORUM WITH FEMA
Please join FEMA staff to discuss mapping needs, grant opportunities and compliance of development regulations during this open forum drop-in discussion. FEMA staff will be available to field your questions and direct you to the appropriate resources to address your concerns.

OPEN FORUM WITH CA, NV (AND HI pending) State and Local Floodplain Managers
Please join us for an overview of the key projects and updates from staff representing multiple state and local agencies with floodplain management responsibilities. Agencies hosting the open house include: NV DWR, CA DWR, CalOES (invited), etc.

CALIFORNIA, NEVADA AND HAWAII SILVER JACKETS
Silver Jackets Annual In Person Meeting
Have you wondered how you could get multiple agencies working together to support your community? If so, come to the Annual Silver Jackets In-Person Meeting to learn more about all the great things the California and Nevada Silver Jackets Teams are working on. We will discuss this year's accomplishments. We look forward to hearing what is important to you, and what you would like to see the team accomplish next year. We hope our colleagues in Hawaii will be able to make the meeting too, and that it will serve as inspiration to initiate their Silver Jacket's team.

Leads: Rachael Orellana and Hunter Merritt, USACE; Mary Jimenez and Maria Lorenzo-Lee, CA DWR

CRS ONE-ON-ONE APPOINTMENTS
TBD Room
Appointments can be scheduled for any time from 1:00pm-5:00pm Wednesday, September 5. To ensure your first choice of available times, please contact Constance Lake at 307.258.5661 or clake@iso.com. Meetings will be held in the TBD Room of the Conference Center. This is an opportunity to discuss specifics about your program to find out what is needed for your community to join CRS or improve its current CRS classification. 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.

CRS 101 WORKSHOP: INTRODUCTION AND BASICS TO THE COMMUNITY RATING SYSTEM
TBD Room
Instructor: Constance Lake, CFM, ISO/CRS Specialist

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 2017 CRS Coordinator’s Manual. 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 84, of California’s 518 NFIP communities have joined the CRS. California CRS communities are saving their residential and business property owners more than $14 million each year.
CRS ADVANCED WORKSHOP
TBD Room
Instructor: Constance Lake, CFM, ISO/CRS Specialist

This workshop will cover in greater detail specific Activities that most advanced class CRS communities apply for. This will include some elements within the 2017 CRS Coordinator’s Manual from Activities 330, 370, 430, 450 and the 600 series. Other Activities and elements can be considered if time allows and participants are willing. Attendees are encouraged to ask technical questions pertaining to specific CRS Activities, share their experiences and ideas on implementing CRS Activities, and suggest how the CRS Program might be improved to encourage greater participation in California, Hawaii, and Nevada.

Emerging Professionals and Mentor/Mentee Session
Guest Speaker:
The FMA Emerging Professionals Committee meets monthly to provide networking opportunities and mentorship opportunities. This year the Emerging Professionals Committee will be concluding our Pilot Mentorship Program at the FMA Conference and kicking off our new Mentorship Program. Emerging Professionals are those who are new to floodplain management for the first 10 years in floodplain management. Emerging Professionals are always looking for mentors or those who are “young” at heart. All are welcome!

Modeling and Mapping Committee Meeting
The FMA Modeling and Mapping Committee (MMC) meets annually to discuss modeling and mapping issues and strengthen working relationships among the professionals who do modeling and mapping of floodplains. This year the MMC will discuss how the challenge models went, modeling and mapping floodplain management issues, and set goals for the upcoming year. All are welcome.

Field Trip – Tijuana River Valley
The Tijuana River Valley (Valley) has a decades-long history of flooding and water quality issues. Although significant improvements in the area of wastewater treatment have in recent years improved water quality on both sides of the border, stormwater flows continue to bring substantial amounts of sediment and trash and other contaminants into the Valley from sources in both the United States (U.S.) and Mexico. The sediment and trash pollutants cause water quality impairments, threaten life and property from flooding, degrade valuable riparian and estuarine habitats, and impact recreational opportunities for residents and visitors.

Efforts to protect and restore Valley resources are not new; sediment management, land preservation and habitat restoration have been conducted in the Tijuana River watershed for many years. Local, state, and federal management agencies, along with many non-governmental organizations and other stakeholders have invested significant effort and funding in project planning and implementation both in the U.S. and in Mexico to improve conditions. Recent activities have included pollution prevention and source control for sediment and trash, water quality improvements, flood control, improved recreational opportunities, and public education and outreach. These projects demonstrate the dedication and wealth of experience that the various operating agencies and stakeholders have invested in the Valley and watershed.
The future brings many challenges for the Valley. The bi-national nature of the watershed is one major obstacle. It is well known that source control and pollution prevention activities can be the most cost-effective solutions to reduce sediment and trash loading. With the majority of the watershed situated in Mexico, planning and implementing source control and other projects across the international border present an added challenge to an already complex problem. Other challenges include:

- Identifying long-term funding for operation and maintenance of sediment and trash management facilities,
- Coordinating agencies in project review and approval, and
- Scheduling projects to meet short-term sediment and trash control needs with long-term restoration goals while maximizing funding opportunities.

Please join us for this opportunity to visit this complex watershed (U.S. side only) and hear directly from many of the stakeholders on the unique challenges. Our stops are anticipated to include the Tijuana River Estuary Visitor Center for a brief introduction and kick-off. We will then start the tour at the upstream end of the Valley where U.S. Customs and Border Protection will escort us for portions of the tour along the border (Tijuana River Flood Control Project). Moving downstream, State and County Parks will highlight ongoing sediment and trash capture projects along several of the main tributaries. We will culminate with lunch and a special presentation at the picturesque Border Field state park.

This should be a very fascinating and informative tour, especially with the recently renewed focus on cross-border issues.