

**Association of State  
Floodplain Managers**



Dedicated to reducing  
flood losses & protecting  
floodplain resources

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# NEWS&VIEWS

Vol. 31, No. 3

June 2018

## Meet your 2018-19 ASFPM Board of Directors



From L-R: Del Schwalls (Reg. 4); Rod Renkenberger (Reg. 5); Steve Samuelson (Reg. 7); Necolle Maccherone (Reg. 3); Dave Carlton (Reg. 10); Amanda Flegel (Treasurer); Rebecca Pfeiffer (Secretary); Maria Cox Lamm (Chair); Jeanne Ruefer (Reg. 9); Brian Varrella (Vice Chair); Dianna Woods (Chap. District 5); Heidi Hansen (Chap. District 4); Larry Larson (Director Emeritus); Katie Sommers (Chap. District 2); Janet Thigpen (Chap. District 1); Ingrid Wadsworth (Deputy Director); and Traci Sears (Reg. 8).

Not pictured: Melinda Hopkins (Reg. 1), Michelle Gonzales (Reg. 6) and Tara Coggins (Chap. District 3)

*Photo by John Hays.*

Unless noted with a photographer's name, all conference photos shared in this newsletter were taken by Michele Mihalovich, ASFPM public information officer, or came from Twitter and used the #ASFPM2018 hashtag. Thanks to everyone who posted on Twitter!

# #ASFPM2018 Conference Recap

Our first plenary, typically on Tuesday, always marks the official opening of the conference, even though many had been at the conference since Saturday attending board and committee meetings, national policy updates and a Sunday evening “Welcome Fest.”

Despite the festive mood in the Phoenix Conference Center’s Ballroom, the plenary topic was pretty serious: Rebuilding 2017—The Year of Disasters.



*Christy Jones (left), Deputy Director for Statewide Emergency Preparedness and Security for California, and Harris County, Texas Judge Ed Emmett.*

Harris County, Texas Judge **Ed Emmett** walked us through the [emergency situations Houston faced during last August’s major flooding event](#). For six days, few of the people in charge of emergency operations hardly slept, including Emmett. But it wasn’t until he went to visit his daughter after some flood waters had receded, that he said his life changed, and redefined his role when it comes to resiliency. Driving around, he saw giant piles of debris lined up in front of people’s homes that went on and on. And it hit him. “Those aren’t debris piles. Those are people’s lives,” he told the crowd of 900 at ASFPM.

He came up with what he called his equation for resilience: (Prevention, Preparation + Response, Recovery) (Policies, Priorities, Resources) = Resilience. Harris County also passed some of the most restrictive building codes in the nation in December to try and make sure flooding events never impact residents like it did from Hurricane Harvey.

Emmet stressed how important our jobs are as flood risk professionals, and said, “If you have to grab elected officials like me by the throat, and shake us to make us do the right thing, do it!”

**Christy Jones**, Deputy Director for Statewide Emergency Preparedness and Security for California, said it would be much easier to list what disasters didn’t happen in [California in 2017](#). Note: they did not have a zombie apocalypse. But the state was visited by flooding in February that caused major damage to the Oroville Dam, forcing almost 200,000 people to evacuate. One of the most destructive fires in the states history tore through wine country, destroying more than 5,000 buildings and killing 44. And as we all know, where there was a fire, a flood often follows. Of course the Santa Barbara flash floods didn’t hit until this past January, but it is all related. Jones said almost every county had a federal or state declared disaster in 2017. Most of her discussion focused on what the state learned and how they will respond better next time. She said, “Training is always key. And that training happening BEFORE the event is ideal.”

# Visiting Dignitaries from Australia

**Ian Dinham**, president of [Floodplain Management Association in Australia](#), spoke at our Tuesday Keynote Luncheon. ASFPM and FMA have been “partners” for years, regularly attending, learning and sharing at each other’s national conferences.



*Ian Dinham, president of Floodplain Management Association Australia, presents while ASFPM Chair Maria Cox Lamm looks on.*

This year was no different. Dinham shared how Australia differs from the U.S., and other countries, especially in terms of funding for flood mitigation projects. Let’s face it, almost all countries could be doing better in that area. Probably the most interesting part of his speech involved flood insurance. He said that up until 2007, the country had no flood insurance whatsoever.

In 2007, major flooding caused so much destruction in New South Wales, that the government “directed the private insurance companies to pay out on flood damage claims even though the insurance policies did not cover flooding,” he said. Assuming that they would have to continue to pay out on floods, the industry started working on developing flood insurance policies and calculating appropriate premiums. But they needed data to accurately assess the risk to each property. Dinham said that’s where FMA came in.

“We have worked with our members and the insurance industry to garner the cooperation of councils in releasing flood data and information so that insurance premiums can be kept as low as possible for the prevailing risk,” he said. “I think we now have approximately 98 percent of Australian properties covered by flood insurance.”

Now that IS impressive!



*From L-R: ASFPM Deputy Director Ingrid Wadsworth, ASFPM Chair Maria Cox Lamm, ASFPM Director Emeritus Larry Larson, Allan Gear (FMA Australia) and Ian Dinham (President FMA Australia). Photo by Emma Larson.*



Wednesday is Chapter Day, and it starts bright and early with a 5K run/walk!

This year marked the sixth year of the race, called "Run for the Shade," and was put on by our local host team, the Arizona Floodplain Management Association.

*From Twitter: @FLfloods member **Frank Skarvelis** finishes last in the 5K for the sixth year in a row, including his signature cigar. This tradition will last, even if sometimes we have to carry him across the finish line ourselves. Wish you were here Frank! #ASFPM2018*

Thanks **Josh Overmyer** for bringing Frank, and his cigar, along for the race!



The runners to the right are the female and male first-place winners of "Run for the Shade." **Marie Palko's** time was 22:07 minutes (she's from Nashville, Tennessee), and **Joseph Cuffari**, of Tucson, Arizona, ran it in 18:06 minutes. Congratulations for running in that heat!



## Our Second Plenary Focused on NFIP Issues and Implementation Strategies



*Pictured L-R: ASFPM Director Emeritus Larry Larson, Cheryl Small, Laura Lightbody, Carolyn Kousky and David Maurstad with Jo Ann Howard projected on the screen.*

**Jo Ann Howard**, president of H2O Partners and former federal insurance administrator, shared the history of the NFIP over last 50 years. Her overall message was that reducing risk has always been a part of the program. It's not that FEMA doesn't want to improve systems, but they do have to work through Congress. So the process may be slow, but will happen. Be patient, she said. Howard also discussed the need for communication, partnerships and knowledge as the private sector becomes more involved in the NFIP

**Cheryl Small**, executive director of the National Flood Association (formally called the National Flood Determination Association), walked the audience through the flood zone determination industry, which she described as a relatively new industry, formed in the 1980s as a result of the passage of the Mandatory Purchase legislation that became effective in 1974. "The lenders were designed in the legislation to be key to compliance. The flood zone determination industry grew up to service the needs of the lenders for compliance with mandatory purchase requirements," Small said. In the early days, it was all paper and fax machines. Today, the advancement of GIS technology and prevalence of aerial and satellite imagery drove continued innovation in the industry. Digital layers for parcel data, building footprint data, other supporting data layers including flood—all georeferenced—assisted companies in the development of highly accurate means to automatically return completed flood determinations within seconds to lender and insurance clients."

**Laura Lightbody**, project director for The Pew Charitable Trusts' Flood Prepared Communities, said there have been some positive actions from Congress this year. FEMA's Pre-Disaster Mitigation Program received more than three times the average in the last 15 years, and mapping increased by \$85 million. However, "The NFIP remains unreformed and vulnerable to lapses. At some point, Congress has to put pen to paper and thoughtfully reform the program...I will just close on one point. Flooding should not be a partisan issue. It knows no boundaries, doesn't care about jurisdictional lines, nor if you are a republican or democrat."

**Carolyn Kousky**, director of Policy Research and Engagement, Risk Management and Decision Processes Center at Wharton School of the University of Pennsylvania, stressed that flood maps are meant to run the [#NFIP](#), not to be a communication tool. She said the government should make public risk maps to be used for communication risk.

**David Maurstad**, deputy associate administrator of FEMA's Federal Insurance and Mitigation Administration, focused on how we all must work toward closing the flood insurance gap. He said, "Post disaster relief looks different for those without flood insurance. They're on a difficult recovery path, usually one of despair, anxiety and regret. And we have the power to change that dynamic...more insured survivors means less disaster suffering."

**BONUS!** Due to time constraints, you all had several questions during this plenary that weren't able to be answered. So next month in *The Insider*, the panelists will answer many of those questions!

**Wednesday also afforded a working session with state NFIP coordinators discussing the future of Community Assistance Program—State Support Services Element**



Photo by ASFPM Chair Maria Cox Lamm.



The **Flood Warning Technical Field Tour** on Wednesday focused on the nature of floodplains in the desert and how floodplain management and flood warning systems work together to support flood safety in rural and urban areas around Phoenix. Participants also learned about a variety of floodplain management techniques implemented to warn or remove people from harm's way. They viewed repetitive loss properties, buyout areas, flashing road warning signals, and a multi-use flood control facility. Participants also visited a flood warning/decision support center to see how emergency action planning and communications are handled. Below are pictures from the tour of **Kevin Turner** and **Josh Yates** of Tuscaloosa, Alabama.



## Third Plenary Focused on “Making it Work: Flood Mitigation Best Practices and Success Stories”



*L-R: Steve Martin, Kelli Sertich and Roger Lindsey. ASFPM Vice Chair Brian Varrella (not pictured) served as moderator.*

**Steve Martin**, Florida’s state NFIP coordinator, highlighted the successes of Florida’s CRS/CAV Pilot Program. The program is helping localities join the CRS, while streamlining higher standards, improving compliance and increasing resilience. [You can view Martin’s PowerPoint here.](#)

**Kelli Sertich**, branch manager for Policy, Planning and Coordination with the Flood Control District of Maricopa County, Arizona, explained the evolution of the county’s mitigation efforts with a bit of humor. You can [view Sertich’s presentation here](#) (sorry, this PowerPoint won’t include the “ocean front property in Arizona” clip by George Strait, but it will explain the “Pre-Trapezoidal Period”).

**Roger Lindsey**, stormwater program manager for Nashville Metro Water Services in Tennessee, spoke about his city’s mitigation efforts after “a big honkin’ flood” in May 2010. He said one of the first things they did was contact Cedar Rapids, Iowa officials who had just went through a major flood event in 2008. “And you know what every single person in Cedar Rapids told us? They said you **MUST** enforce your floodplain regulations,” he said. And that is what Nashville did. Lindsey also highlighted other mitigation efforts, and briefly showcases what he’s learned about “atmospheric rivers.” [View his full presentation here.](#)

We are in the process of uploading presenters' PowerPoints and other presentation materials, as well as videos of our plenaries, Tuesday luncheon and Thursday awards luncheon. We will notify you via our social media sites, and in next month’s Insider newsletter. Keep your eyes open for the announcement!





## Top Tweets Using #ASFPM2018

The top tweet was by a person not even AT ASFPM's annual national conference, but he was replying to a tweet from the The Pew Charitable Trusts' Laura Lightbody, who WAS at our conference. Both used the hashtag, but [@WCraigFugate](#) received **69 likes**. So technically, the former FEMA director is crowned with #ASFPM2018's most "liked" tweet.

[@lbodss](#) tweeted: A lot of people at #ASFPM2018 asking how we hold developers accountable...



[@WCraigFugate](#) retweeted with this: Stop providing Taxpayer Subsidize National Flood Insurance for new construction in Flood Zones. If the private sector will not insure, don't build there. [#ASFPM2018](#)



[@dplasenciaflood](#)'s tweet received **28 likes**: Sure sign that the nation's floodplain managers are coming to Phoenix this weekend [#ASFPM2018](#) Rain on the historically driest day of the year (1% chance of rain today) [@FloodsOrg](#) [@ASFPMfoundation](#)

This tweet from [@ASFPMfoundation](#) garnered **23 likes**: Ann Terranova with [@AECOM](#) and Mike Graham with Smart Vent have been unanimously approved as ASFPM Foundation Trustees by the [@floodsorg](#) Board of Directors at [#ASFPM2018](#). Welcome to the Board of Trustees Ann and Mike!

This tweet from [@TMcDJr](#) received **21 likes**: [#asfpm2018](#) [@ASFPMfoundation](#) [@FloodsOrg](#) proud of my "flood brother" Local Floodplain Manager of the Year!



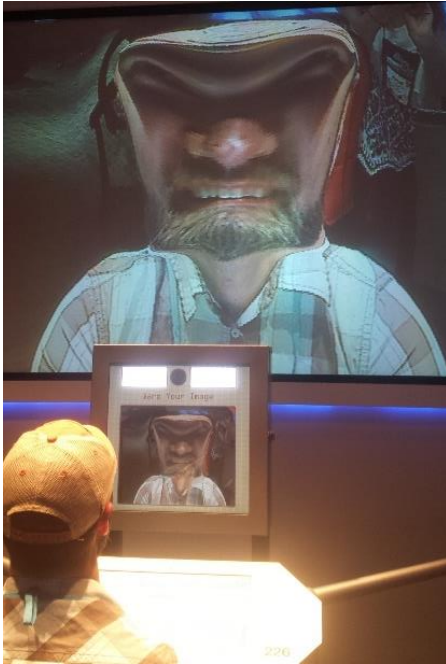
[@FloodsOrg](#) received **19 likes** for this tweet: Man, was that an awesome story or what? Congrats to Jesus Mulgado, [@ASFPMfoundation](#)'s 1st Future Leaders Scholarship Award Winner! [#ASFPM2018](#)

### Mark Your Calendars for our Upcoming National Conferences

[Cleveland, Ohio, May 19-24, 2019](#) [#ASFPM2019](#)

[Fort Worth, Texas, June 7-12, 2020](#) [#ASFPM2020](#)

## Arizona Science Center Final Night Send Off...



[Click here for more photos from #ASFPM2018](#)

## As One Chapter Closes, a New One Begins...

First, a special thanks to our local host team in Phoenix, the [Arizona Floodplain Management Association](#). You all did a WONDERFUL job!

To make the formal announcement about ASFPM's Flood Fest 2019: Mitigation & Resilience Tour in Cleveland, Ohio, was none other than **Axel Rose** himself. OK, the bandana-clad stud was actually **Shawn Arden** from the [Ohio Floodplain Management Association](#). With him was **Alicia Silverio**, the local host team coordinator. Looking forward to #ASFPM2019 May 19-23!!!



*Axel Rose is in the house*

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Be sure and check out ASFPM's July newsletter, *The Insider*, where we will highlight all of our award winners, including the CRS and CTP winners. We'll also have a feature on **Jesus Mulgado**, ASFPM Foundation's 1st Future Leaders Scholarship Award Winner. And we'll have #ASFPM2018 by the numbers!



# ASFPM Chapter Inspired by Innovative Inland Floodplain Solution in a Connecticut Riverine Community

Written by Emmeline Harrigan, AICP, CFM, chair of Connecticut Association of Flood Managers and assistant planning director for Fairfield, Connecticut.



*Photo courtesy of Emmeline Harrigan.*

The Connecticut Association of Flood Managers, ASFPM's 36 chapter, went on a field tour last year to the Meriden Green in Meriden. CAFM chose this inland site - located almost directly in the middle of the state - to expand its training beyond the heavy focus on the coastal communities hard-hit by Storms Irene and Sandy.

We were joined by Meriden, Connecticut's Public Works Director **Bob Bass** and City Planner **Bob Seale**, who described the decades-long process in creating the 14-acre Meriden Green. It was a unique experience for CAFM members as we walked through the park, took in the grand scale of the project, and saw first-hand its special construction details. The city worked with Connecticut-based engineering, planning and design firm Milone and MacBroom for the project design and permitting process.

The site was originally a manufacturing facility, then a defunct shopping center that had been long shuttered after several significant flooding events. As part of this ambitious flood mitigation project, the city of Meriden acquired and cleaned up the site, and unearthed a once-hidden stretch of Harbor Brook that passes through its downtown. Combining the co-benefits of flood mitigation and economic revitalization, a key aspect of the project was the creation of the Meriden Green, a new urban park located near the Meriden Transit Center that doubles as a flood storage facility. In turn, the locations

adjacent to the newly expanded New Haven to Hartford train service and Meriden Green has also spurred new mixed use and multi-family residential projects at the edges of the new park.

Seeing Meriden Green in person not only re-emphasizes the importance of innovative floodplain solutions in Connecticut's riverine communities, but also shines a light on the potential power of acquisition projects that are otherwise discouraged by local communities fearful of tax revenue reductions. The project provides a fantastic example to this state and other communities nationally how public open space solutions may be not only a cost-effective solution to future flood losses, but also how, in the right locations, can be economic drivers to help revitalize otherwise underperforming villages, towns or city centers.

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## Ready to take the CFM® exam?



To help you better prepare for the CFM exam, the ASFPM Certification Board of Regents just released a [study guide](#) that explains recommended prerequisites, what to expect on exam day, links to all technical references backing up each exam question, and supplemental study materials including videos and online tutorials.

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## 2018 Storm Surge Report Released

In the 2018 Storm Surge Report, CoreLogic® analyzes the coast from the northernmost tip of Maine all the way down to Texas, evaluating the reconstruction costs and financial risk of an impact. CoreLogic® assesses the risk of surge-related property damage along the coast of the United States, calling out areas at risk, costs to reconstruct along with a perspective of the storms to come. [Get a copy of the report here.](#)



*Photo of March 3, 2018 storm surge in Revere Beach, Massachusetts taken by Dennis Forgione ([via Flickr](#)).*

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# Policy Matters!

Larry Larson, P.E., CFM

Director Emeritus – Senior Policy Advisor, ASFPM



## Will National Flood Policy Changes Next Year Impact Your Day-to-day Job?

Many flood policy changes will be considered or implemented over the next year. Which ones are being considered and how might they impact you?

ASFPM members work with national policies every day in their community, state or company. It may be the NFIP development regulations, flood mapping, USGS stream gauges, flood mitigation efforts with FEMA, building codes, HUD mitigation or disaster assistance, NOAA, Corps of Engineers, USDA, disaster programs for public infrastructure rebuilding, technical assistance programs from myriad federal agencies like Silver Jackets, NOAA Digital Coast, and many others.

On the top of the list for possible changes in the next year are the NFIP changes during reauthorization. The program has been extended a number of times and now may expire July 31, 2018. Congress will either act on it or extend it again. The big issues include premium rate increases, changes to increase the role of private flood insurance, affordability of policies for homeowners, increased funding for mitigation such as Increased Cost of Compliance and FMA, flood map funding and NFIP debt. All of those changes can greatly impact how many people will buy flood insurance, and how many may drop it because they incorrectly think the federal taxpayer will bail them out if flooded.

The latter point shows the NFIP tie with disaster relief under the Stafford Act, which is also being considered for significant changes. A possible big infusion of funding for the Pre-Disaster Mitigation fund seems close to happening—this will provide all communities and states with mitigation opportunities that can be spent wisely or badly (our members will be pushing for wisely). Thanks to insistent efforts by ASFPM Executive Director Chad Berginnis and team, the bill will likely include funding for community-to-community mutual aid for massive post disaster assessments for substantial damage and building permit issuance. When thousands of home are damaged, communities need this help. At the same time, versions of this bill would move funding from FEMA nonstructural programs to USACE structural programs, which would be a step in the wrong direction.

The Water Resources Development Act is usually passed every two years by Congress to authorize USACE projects, policy and programs. It has the usual array of good and bad ideas. Changes to who (federal taxpayer or local sponsors) pays for repairing damaged flood control projects is one we need to watch closely. Good provisions include support of nature based options, and reauthorization of the dam safety and levee safety programs. But these need to be done carefully. It has been proposed to remove federal oversight of levees, which would lead to levee wars from one state vs another in order to raise their levee and push water onto the community across or up or down the river.



Funding to complete and upgrade flood maps is always an issue for all 22,000+ communities in the NFIP. Only a third of the floodplains in the nation have been mapped, and only half of those have detailed maps. ASFPM members and leaders will continue to push for added funding of flood maps, and Congress appears to finally be listening. This must include new 3-DEP contour maps; which funding is part of the USGS budget.

Major disasters in 2017 cost the American federal taxpayer hundreds of billions of dollars. ASFPM members work hard to ensure funding is used to build back safer and more resilient and protected from expected future flooding.

Existing national programs you work with are proposed to be changed almost yearly. An example is a proposal from FEMA to drop buyouts and other nonstructural mitigation as priorities for mitigation funding—an idea we all need to oppose vigorously. ASFPM will keep abreast of these proposed changes and will work with our members and committees to submit comments about how those changes would impact communities and states—either positively or negatively. Please continue to let ASFPM know how these national programs are working or not working well so we can work on your behalf to reduce flood losses in the nation now and in the future—all in a manner that will protect natural systems that help reduce flood losses.

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## Turning Coastal Data and Tools into Actionable Information

A free webinar at 1 p.m. EDT July 31 by Josh Murphy, Doug Marcy and Nate Herold of NOAA

NOAA's Digital Coast, which ASFPM is a partner, provides public access to coastal data, tools, training and resources in order to meet the unique needs of coastal communities. Coastal resource managers can access collections of high quality, authoritative geospatial data (e.g., topography, coastal land cover change, socio-economic information), tools and trainings to address coastal and ocean management challenges. More than just a [website](#), the Digital Coast provides the framework and information needed to save organizations time and money and allows groups that might not otherwise work together to join forces. Content on the Digital Coast comes from many sources, all of which are vetted by NOAA. This webinar will provide an overview of the Digital Coast and demonstrate two geospatial tools that turn data into actionable information: 1) Sea Level Rise Viewer (<https://coast.noaa.gov/digitalcoast/tools/slr>), which visualizes coastal flooding scenarios and social vulnerability due to sea level rise; and 2) Land Cover Atlas (<https://coast.noaa.gov/digitalcoast/tools/lca>), an online data viewer that provides user-friendly access to coastal land cover and land cover change information developed through NOAA's Coastal Change Analysis Program. Visit NOAA's Digital Coast at <https://coast.noaa.gov/digitalcoast>. Webinar hosted by the EBM Tools Network (co-coordinated by OCTO and NatureServe). **Register for the webinar at [https://zoom.us/webinar/register/WN\\_WzBSJVBbRISezGWIljqDQ](https://zoom.us/webinar/register/WN_WzBSJVBbRISezGWIljqDQ).**



# Your Voice is Needed to Help Develop a Community Flood Risk Guidebook

Written by Tim Trautman, P.E., CFM, Charlotte-Mecklenburg's Storm Water Services  
Program Manager & ASFPM's Mitigation Pod Facilitator



Our profession recognizes hazards are an act of God and nature. We live in a beautiful, dynamic and sometimes violent world. However, our modern society has “rode around the sun” enough times to be able to predict where most flood hazards will occur. Either by mapping, past history or intuition, we know where flooding is most likely in our communities. We also know what properties are most likely to get damaged or destroyed by floods. Sure, there are a few surprises along the way, but unpredictable events are rarely the ones that emotionally and financially devastate our communities and federal resources.

Local communities have the biggest impact on whether flood hazards become disasters. We all need places to live, work and recreate. Development is necessary within our communities as part of living in a modern world. WHERE and HOW we grow, coupled with how we ADAPT our existing risks, are the key pieces to a hazard resilient community. Ultimately, effective risk management and long-term resilience must be formed and managed at the local level. We should want locals to take on ownership of their flood risk and work with state, federal and private sector to drive risk to a level they can live with.

What if proactive communities had the knowledge, skills and ability to manage their flood risk like a portfolio of assets (tracking risk like retirement investments)? Flood risk in each of our communities changes every year with growth and mitigation actions.

Charlotte-Mecklenburg Storm Water Services in North Carolina is working on a project for Department of Homeland Security to develop a *Flood Risk Guidebook* that communities could use to manage their “flood risk portfolio” in the floodplain. It will be based on a Risk Assessment and Risk Reduction planning tool we developed five years ago. But your input, along with lessons we’ve learned, will help us refine the approach so it’s applicable to a wide variety of communities (different flood types, datasets, mitigation approaches, etc.).

**PLEASE HELP US HELP COMMUNITIES ACROSS THE COUNTRY.** I’m asking you to provide input from a community perspective by taking an [18 question survey](#). Although it will focus on flood, the guidebook concepts could have applicability to other hazards too. Please [share the survey](#) with any other communities you know of that deal with flood hazards.

Visit [www.ManageFloodRisk.org](http://www.ManageFloodRisk.org) for more background on the project and to take the [flood risk survey](#).

Together we can serve our communities in bigger and brighter ways! Thanks!

# Credit Downgrade Threat as a Non-regulatory Driver for Flood Risk Mitigation and Sea Level Rise Adaptation



**John A. Miller**, a long-time ASFPM member and Master of Environmental Studies-Environmental Policy at the University of Pennsylvania, recently published "[Credit Downgrade Threat as a Non-regulatory Driver for Flood Risk Mitigation and Sea Level Rise Adaptation](#)."

In the paper, he found that Hurricanes Harvey and Irma seemed to have increased the tempo in investor and credit rating agency interest in climate change risk. Communities that prepare and adapt to future flood and sea level rise risks will not only be safer and more resilient in recovering from inundation and storm events, but will be more fiscally sustainable and economically secure with public support offered to proactive elected officials and professionals.

Some of the key findings in the paper, which was informed by input from ASFPM's Director Emeritus **Larry Larson**, P.E., CFM, and **Howard C. Kunreuther**, PhD of the Wharton Risk Management and Decision Processes Center, University of Pennsylvania, found:

- Credit rating companies are beginning to look at the climate change threats to municipal revenue; interest will increase especially in coastal areas;
- Investors are asking questions about climate change as a material risk and will be driving transparency, detail and refinement in climate change risk evaluation; expect investors to demand more detailed assessments;
- Local government must start planning and being proactive in adaptation. They should have answers for credit agencies and investors' questions on vulnerability and climate change impacts on property value and revenue.





## Institute for Water Resources Welcomes Dr. Joe Manous as New Director

The [Institute for Water Resources](#) welcomes new director Dr. Joe Manous. He will oversee a multi-disciplinary Field Operating Agency that supports USACE's Civil Works (water resources) missions through water resources planning, policy and decision-support model development; hydraulic and hydrological engineering; dam and levee safety; and training and national/international interface with academia, professional societies, and non-government organizations.



Prior to becoming IWR director, Manous served as a Water Resources Engineer and Manager for International Activities at IWR, where he specialized in the areas of water resources and environmental security issues associated with water. He also worked closely with the Office of the Assistant Secretary of the Army for Civil Works, Headquarters USACE, and was an Adjunct Professor at George Mason University teaching courses in engineering economics and water resources. Manous is a retired US Army Corps of Engineers officer and his last active duty assignment was as Academy Professor at the United States Military Academy at West Point, where he taught courses in environmental engineering, water resources, and environmental security.



Manous is a graduate of the Georgia Institute of Technology (Civil Engineering), North Georgia College (Physics), University of Illinois (M.S., Civil Engineering), US Army War College (Masters of Strategic Studies), and University of Minnesota (Ph.D., Environmental Engineering). He is active in several professional engineering organizations including American Society of Civil Engineers, National Society of Professional Engineers, National Institute of Engineering Ethics, Society of American Military Engineers, Order of the Engineer, and the Army Engineer Association. Joe is a 2014 recipient of the SAME President's Medal; 2012 ASCE Government Engineer of

the Year award; 2012 The Infrastructure Security Partnership, Annual Award for Distinguished Leadership in Critical Infrastructure Resilience; 2010 ASCE Professional Practice, Ethics, and Leadership Award; and 2008 AEA Silver deFleury Medal. Manous is a Diplomate of the American Academy of Water Resources Engineers (D.WRE) and a registered Professional Engineer in the Commonwealth of Virginia. Joe is married to the former Stephanie Scott of Decatur, GA, and they have four children, Kristen, Andrew, Abby, and Olivia.



## Federal Insurance: Moonshot Starter Kit Now Available



The stakeholder starter kit is designed to help you deliver strategic messaging to your communities about the significance of purchasing flood insurance now. The starter kit consists of key messages and templates that stakeholders can leverage to communicate the role insurance plays in advancing our nation's resilience following a disaster: <https://www.fema.gov/media-library/Assets/documents/166428>

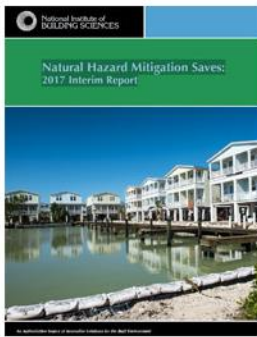
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## Job Corner

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Take a look at job postings on **ASFPM's Job Board**. And if you're an employer, posting a job is absolutely FREE! Below are just a few of the jobs currently on our board. Check them out on [ASFPM's Job Board](#).

- **Atkins in Austin, Texas is hiring a water resources/drainage project manager.**
- **A general manager for the Upper Brushy Creek Water Control and Improvement District is needed in Texas.**
- **Atkins in Beltsville, Maryland is looking for a senior drainage engineer.**



# Natural Hazard Mitigation Saves: New study shows return on mitigation higher than previously thought

The National Institute of Building Sciences issued the [Natural Hazard Mitigation Saves: 2017 Interim Report](#) Jan. 11, 2018, more than 10 years after its original release in 2005. The report studies several hazard categories including riverine flood, hurricane surge, wind, earthquake and wildland-urban interface fire. In recent years, the listed hazards have threatened the viability of entire communities, while severely impacting local economies as well as inflicting harm to citizens and extensive damage to properties.

New Benefit-Cost Ratios were determined for each category by analyzing the implementation of mitigation strategies. The report features two high-level BCRs: one for the analysis of 23 years of federal grants data and another for building new structures beyond code requirements.






The institute's project team looked at the results of 23 years of federally-funded mitigation grants. They found that mitigation funding can save the nation \$6 in future disaster costs for every \$1 spent on hazard mitigation.

In addition, the *2017 Interim Report* demonstrates that investing in hazard mitigation measures to exceed select requirements of the 2015

International Codes, the model building codes developed by the International Code Council, can save the nation \$4 for every \$1 spent.



By applying federally-funded grants and constructing to higher building codes, NIBS estimated that 600 deaths, 1 million nonfatal injuries and 4,000 cases of post-traumatic stress disorder could be prevented in the long term. In addition, designing new buildings to exceed the *2015 International Building Code* and *International Residential Code* would result in 87,000 new, long-term jobs and an approximate 1% increase in use of domestically produced construction material.

The *Natural Hazard Mitigation Saves: 2017 Interim Report* was made possible by funding from FEMA, U.S. Department of Housing and Urban Development, U.S. Economic Development Administration and the International Code Council.

| National Benefit-Cost Ratio (BCR) Per Peril<br><small>*BCR numbers in this study have been rounded</small> |                                      | Beyond Code Requirements | Federally Funded |
|--|--------------------------------------|--------------------------|------------------|
| <b>Overall Hazard Benefit-Cost Ratio</b>   |                                      | <b>\$4:1</b>             | <b>\$6:1</b>     |
|                         | <b>Riverine Flood</b>                | \$5:1                    | \$7:1            |
|                         | <b>Hurricane Surge</b>               | \$7:1                    | Too few grants   |
|                         | <b>Wind</b>                          | \$5:1                    | \$5:1            |
|                         | <b>Earthquake</b>                    | \$4:1                    | \$3:1            |
|                         | <b>Wildland-Urban Interface Fire</b> | \$4:1                    | \$3:1            |



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**News & Views** is published six times each year by the Association of State Floodplain Managers, Inc., and is paid for by member dues.

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