



NEWS&VIEWS

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ASFPM Virtual Conference is Ready to Roll June 9-11

We look forward to seeing you at #ASFPM2020

It won't be long now. A year of planning, of then scrapping the plan and of rethinking what's possible amid a global pandemic, and here we are. The ASFPM Annual National Conference kicks off next week with three full days of online programming dedicated to all aspects of flooding and floodplain management.

The theme to this year's conference—**Resiliency Where the West Begins**—has taken on new meaning as we transition the conference to a fully virtual event. The response from presenters, sponsors, and attendees has been overwhelmingly positive, so we hope you can join us, too!

Members have until Friday, June 5 to take advantage of members-only pricing of \$300. After that, rates increase to \$350 for all attendees.

The virtual conference includes:

- Three plenary sessions
- More than 150 presentations across 50+ concurrent sessions
- Live Q&A
- A virtual exhibit hall
- On-demand access to the entire conference until Jan. 31, 2021
- Social activities to engage with attendees afterhours
- And much more

[View the conference program](#)

Continuing Education Credits (CECs)

The conference is approved for 12 Continuing Education Credits for Certified Floodplain Managers and 16 Certification Maintenance credits for American Institute of Certified Planners (AICPs).

[Register Now](#)



Making the Case for a Federal Flood Protection Standard

By Joel Scata

Heavier rains, intensifying coastal storms, and rising seas—the impacts of climate change—are exacerbating flooding impacts across the United States.

However, despite these worsening impacts, the [Trump administration revoked](#) Executive Order 13,690 and the Federal Flood Risk Management Standard (FFRMS) in August 2017, leaving new federally-funded infrastructure projects—the nation’s roads, schools, seaports, and wastewater treatment plants—less prepared to withstand future flood events. As a result, millions of Americans who live, work, or travel in coastal and inland areas susceptible to flooding will face growing challenges as the public infrastructure on which they rely only becomes more vulnerable.

Enacting a new flood protection standard would help better protect people and property, and could ease the federal government’s growing financial exposure by ensuring federally financed infrastructure is better prepared for and adapted to flooding exacerbated by climate change.

In [A Rising Tide Lifts All Damage Costs: The Need for a Federal Flood Protection Standard](#), a new article in the spring edition of the American Bar Association’s environmental law magazine, the threat to America’s public infrastructure from more frequent and severe flooding—absent a modern federal flood protection standard—is made clear. Read the article [here](#).

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ASFPM Submits Comments on BRIC Program

On May 11, ASFPM submitted its comments to the proposed Building Resilient Infrastructure and Communities (BRIC) grant program. BRIC is the new formula-based mitigation grant program that replaces PDM grants.

ASFPM has been a champion of the federal government’s role in hazard mitigation since before the original Stafford Act in 1988 and continues to support FEMA’s pre- and post-disaster mitigation programs. Both are important elements in the nation’s overall approach to reduce long-term risk to hazards and build community resilience. This fund provides cost sharing grants to states, communities, tribes, and territories to build disaster resilience. The guidance is relatively broad with the hope it can result in innovative solutions to disaster risk mitigation, and will foster community, regional, state, and national partnerships in this effort.

The BRIC program has the potential to make significant improvements in reducing losses and suffering from natural hazards, with flooding being the most common and costly of the hazards. ASFPM will continue to work with FEMA in implementing this key program, as the Notice of Funding Opportunity (NOFO) and application period occurs this summer and fall.

[Read the comments ASFPM provided to FEMA.](#)

Recommendations for Addressing Dam Safety

By Ricardo S. Pineda, PE, CFM

In October 2019, I wrote an article for the *ASFPM Insider* advocating for the important role community floodplain managers have in understanding the hazard and risk of flooding from dams and other water detention structures located upstream of their communities. I noted in the article that as a five-year-old, I was nearly caught in floodwaters from the December 1963 Baldwin Hills Dam failure in Los Angeles.



The failure on May 19 of the Edenville Dam, located at the confluence of the Tittabawass River and Tobacco River in central Michigan, was shocking to see but not really a surprise. The dam's earthen embankment failed when the dam was heavily surcharged after storms dropped approximately 5 inches of rain over a 48-hour period on the upstream watershed. I do not believe this was a "500-year flood" as reported by Michigan's governor.

Wixom Lake, impounded by Edenville Dam, dotted with homes, docks, and boats, was substantially drained and the rush of water moving downstream overtopped Sanford Dam and blew out a fuse plug section of its earthen embankment. Portions of the towns of Edenville, Sanford, and the city of Midland were flooded. Midland is home to DOW Chemical and has a substantial inventory of architecturally significant mid-century modern homes. You can easily spend hours watching YouTube videos of the dam breaches and the aftermath of the flooding. Although the event received lots of interest and coverage, most people have moved on to other news-making events; however, we in the floodplain management community should pause and contemplate some of the key takeaways and put together a plan of action.

As floodplain managers, our ranks are made up of a wide range of professions, including engineers, scientists, planners, policy makers, and emergency managers. As floodplain managers, we work through our areas of expertise to reduce the risk of flooding, protect life and property, and preserve and enhance the natural and beneficial functions of floodplains. To carry out this mission, whether we are in the public or private sectors, we need to understand the natural hazards facing our communities and the resultant risk related to those hazards. The FPM community is focused on flood hazards and the need to determine risk. To determine risk, we have to analyze the probability of a flood and the consequences if floodwater inundates an area. Will the floodwaters inundate croplands, open space, rural communities, or an urban center? Flooding in each of these areas will have different consequences and levels of economic loss.

For levees and dams, the mechanisms that can result in structural failure and widespread flooding can be complex and involve many disciplines, including hydrology, hydraulics, hydraulic structures, and geotechnical engineering. We hope that levee failures are rare, but as our climate warms and produces more precipitation, we are seeing more levee failures due to higher river stages and storm surge. Note the large number of levee failures along the lower Missouri River system in 2018 and 2019. Dam failures in the United States are very rare events, however, the Oroville dam spillway emergencies in 2017, the Nebraska Spencer dam failure in 2019, and the recent Michigan dam failures may be a signal that the probability of high hazard dam failures is increasing.

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There are more than 90,000 dams in the U.S., according to the National Inventory of Dams maintained by the US Army Corps of Engineers. Dams operated by Federal agencies are generally well maintained. Nonfederal dams, owned by private companies or public agencies are generally regulated by state dam safety programs. Nonfederal dams that generate hydropower are also regulated by the Federal Energy Regulatory Commission. A [November 2019 study](#) by the Associated Press reported that there were at least 1,680 dams in 44 states considered to be “high hazard” and in poor or unsatisfactory condition. A dam is categorized as “high hazard” if a failure would result in loss of human life. It is also reported that the majority of dams in the U.S. are over 50 years old, many older than their design life. The Association of State Dam Safety Officials (ASDSO) estimates that the cost of repairing high hazard nonfederal dams is estimated at \$20.4 billion ([2019 ASDSO study](#)). The cost of repairs increases to \$66 billion if one includes significant and low hazard nonfederal dams. For Federal fiscal year 2020, the FEMA High Hazard Dam Safety Program had \$10 million in available grant funding.

Given the California dam spillway emergency in February 2017, the Spencer Dam failure in March 2019, and the two Michigan dam failures this May, what should ASFPM be advocating to ensure public safety and reduce flood risk?

ASFPM currently advocates that states develop stronger dam safety programs and that dam inundation maps for both federal and nonfederal dams should be available for public review. In addition, ASFPM has published the report [“A Strategy to Reduce the Risks and Impacts of Dams on Floodplains,”](#) and the report [“NAI How to Guide for Emergency Services.”](#) There’s also the National Academies Report [“Dam and Levee Safety and Community Resilience: A Vision for Future Practice.”](#) I have read these reports and suggest that ASFPM begin a dialog both internally with our policy team and the Risk Communications Committee and Mapping and Engineering Committee to develop a comprehensive set of recommendations on how to improve nonfederal dam safety in the U.S. Collaboration and coordination with the Association of State Dam Safety Officials, the National Association of Flood and Stormwater Managers, the American Society of Civil Engineers, and other flood partners is also recommended.

I offer the following recommendations, which in some cases have been advocated in the past by others:

1. States should examine their dam safety programs and regulations and consider updating their regulations to ensure dam owners properly prepare dam failure inundation maps for the main dam and appurtenant facilities and also prepare standardized dam safety Emergency Action Plans. California updated its dam safety requirements through the passage in 2017 of State Senate Bill 92. This bill could be used as a model for other states.
2. Dam inundation maps for main dam failure and appurtenant facility failure should be made available to the public for both federal and nonfederal dams. The dam failure inundation maps should be available for electronic download and include a “web-viewer” to enter an address or parcel number for easier location of a property within a dam failure inundation zone. States should maintain their own dam failure inundation map GIS databases and the maps should also become part of the USACE National Inventory of Dams GIS datasets.
3. Through utility billing or other means, property owners, located in the dam failure inundation zone downstream of high hazard dams should receive periodic notifications of the availability

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of maps and the current inspection rating of the upstream dam. Depth of flooding and travel time would also be useful information to provide.

4. States should inspect all nonfederal dams in their state including dams under Federal Energy Regulatory Commission jurisdiction. FERC regulated dams in Michigan are not inspected by the state. Dam inspection procedures and forms should be standardized across the U.S. to the extent possible.
5. States should have the regulatory power to order the dewatering of high hazard dams that receive a poor or unsatisfactory inspection rating or pose a threat to public safety. Public safety should be paramount ahead of recreation, power generation, fisheries, and other dam benefits.
6. The US Army Corps of Engineers should receive increased funding and authorization to their existing Floodplain Management Services Program (FPMS) and to their Planning Assistance to States Program (PAS) to provide dam safety technical assistance to states and tribal nations.
7. A methodology to standardize the quantification of the economic risk and life loss risk from potential dam failure should be developed. The USACE Institute for Water Resources working with FEMA and state partners could take the lead in this effort.
8. Using the standard method for risk quantification, each state should calculate the economic and life loss risk for each high hazard nonfederal dam in their state and develop a ranked listing of high hazard dams based on quantified risk.
9. The FEMA High Hazard Dam Program should receive an appropriate level of funding for the competitive award of grants to reduce the risk of dam failure. It is less expensive to provide grant funding to reduce the risk of dam failure as compared to the cost of a federal disaster declaration.
10. The FEMA Dam Safety Program should develop a set of benchmarks for state dam safety programs that together set a national standard. FEMA could develop a program that incentivizes states to improve their dam safety program to meet or exceed the national standard established by the benchmarks.

I hope this article and these recommendations spur discussion among ASFPM members and leadership and eventually lead to external discussion and collaboration with dam safety stakeholder at the local, state, and federal level. If you have any questions, please feel free to contact me at (916) 574.632 or email me at Ricardo.Pineda@water.ca.gov.

Ricardo Pineda is the outgoing chair of the ASFPM Board of Directors.

**The clock is ticking if you plan to join us
at the ASFPM Virtual Conference.**

June 9-11.

Register now at <https://asfpmconference.org/>



From the Director's Desk

By *Chad Berginnis, CFM*
Executive Director, ASFPM

Where's the Beef?

So I am probably dating myself here, but do you remember this pop-culture phrase from 1984? Back then I laughed out loud every time the commercial aired, but the point of the campaign was to show that a hamburger from Wendy's covered the entire expanse of the bun as compared to their competitors who were alleged to use oversized buns and undersized beef patties.



To me, I think it is an apt analogy for our national mapping of residual risk areas, which includes both levee and dam failure zones. In the case of the Edenville Dam failure in Michigan that occurred last month, thousands of downstream property owners had to be evacuated as homes and businesses were damaged by the subsequent flooding. There were a lot of dimensions to this particular dam failure and the article by ASFPM Chair Ricardo Pineda on page 3 of this month's newsletter discusses several of them. I would like to dedicate my column to focus on one dimension that hasn't gotten really any coverage—the availability of dam failure inundation mapping. Why doesn't the August 12, 2018 Flood Insurance Study for Gladwin County, Michigan (where Edenville Dam is located) include any analysis related to the failure of the dam? Why don't the effective FIRMs have dam failure inundation areas shown on them? At a minimum, why do neither the National Flood Hazard Layer (NFHL) or the National Inventory of Dams (NID) have the dam failure inundation areas identified and available to the public? Why is all of this true when, in fact, the Emergency Action Plan (EAP) for Edenville Dam had these areas identified since 2000?

Beginning in 2012, [federal law](#) has required FEMA, through the National Flood Mapping Program, to identify and publish areas that could be inundated as a result of the failure of a levee, dam, or other flood control structure, and to determine the level of protection provided by any flood control structure identified (42 USC 4101b). In 2016, the Technical Mapping Advisory Council, which was created in law to advise FEMA on the National Flood Mapping Program, reviewed the National Flood Mapping Program. The [report](#) concluded that "FEMA needs to address residual risk areas in the near term. Residual risk areas associated with levees and dams are of great concern."

The report identified one of two barriers to the public availability of these data. The first barrier is that much of this data from the Federal government is restricted; it is usually made available to emergency management personnel, but not to the general public. In 2004, the Department of Homeland Security (DHS) released its Security Classification Guide for the Protection of Critical Infrastructure and Key Resources – Information for Dams and Related Facilities, which listed dam failure inundation maps as "For Official Use Only." This guide was updated in 2010 and the update was silent on dam failure inundation maps. Pages 31-32 of the report describe this in detail. Of note is that there continues to be no clear consensus on whether the data should be made publicly available—with one side arguing that it is in the public interest to share and the other side arguing that the data could fall into the hands of those who wish to do us harm. However, since 2008, the Commonwealth of Virginia has had a [law](#) that not only makes these data publicly available for state-regulated dams but mandates that it be provided in county planning offices and used when new subdivisions are developed. A couple of years ago, I spoke to one of the Commonwealth's dam safety engineers about the law and asked him whether he had any concerns about the information being used inappropriately. He not only said he had zero concerns, but he indicated a strong desire to ensure that downstream property owner and communities have this information.

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The second barrier is funding. Providing these data either on Flood Insurance Rate Maps or as part of the information provided to the communities and public when flood map information is updated takes money and resources. In candid [testimony](#) in front of the House Science Committee, my good friend and colleague, Mike Grimm who lead's FEMA's flood mapping program, indicated that under proposed and recent funding for FEMA's national flood mapping program, inclusions from the 2012 NFIP reform law such as residual risk mapping were not being done because there wasn't the funding to develop and provide these data. ASFPM's overall cost estimate to complete the job of mapping the nation (including getting the residual risk mapping done) is at least \$3.5 billion, [according to our 2020 Flood Mapping for the Nation report](#). Current funding levels are too low.

That being said, I have to wonder if we can't take steps right now to move in this direction. Can we ensure that the online National Inventory of Dams (NID) has the ability to provide dam failure inundation maps? Can the National Flood Hazard Layer (NFHL) include dam failure maps and, at least in states like Virginia where state law mandates it be publicly available, can the NFHL serve up these data? Can updated FIS's begin to identify and discuss in qualitative terms dam failure risks? Can FEMA develop standards and requirements based on newly updated procedures issued by the US Army Corps of Engineers which standardizes the dam failure mapping required as part of emergency action plans for what would be acceptable for FEMA to publicly provide under the National Flood Mapping Program? Can states adopt laws similar to Virginia, or like California include dam failure as part of its real estate disclosure requirements? Can state CTPs put a higher priority on requiring that these data be part of FIRM updates versus being optional?

What is so incredibly frustrating to me is that we have more than 85,000 aging dams in the country, and many of the high hazard dams not only have Emergency Action Plans but also already have some type of dam failure inundation mapping. Yet, somehow, despite the law mandating it be published publicly, it is still being intentionally withheld from the public. And I want to be clear, this isn't just a FEMA issue; rather it is a broad government problem that must be resolved by eliminating the two barriers I've identified.

I think about being a property owner that knows little to nothing about floodplain management. Would you even know to ask the local emergency manager if there was any dam failure risk or if dam failure mapping was available? If you don't know you are at risk, aren't you less inclined to believe local authorities trying to evacuate you 20 miles downstream of a failed dam? If you don't know about the risk of dam failure, how likely are you to buy a preferred risk flood insurance policy? As a property owner, if I were to look at a Flood Insurance Rate Map with a recent date and saw that my property was outside of any flood risk zone, shouldn't I feel safe? After all, FIRMs are produced by FEMA, and if they are current, why wouldn't they be inclusive – especially since the law mandates this type of flood risk be identified and published? Yet, as we have seen time and again from recent dam failures from South Carolina to Michigan just because the FIRM is current, doesn't mean it includes all of the flood risk areas mandated by law. In other words, it may be a really good looking hamburger, but when you look inside you are left asking "where's the beef?"

As a nation, as a profession, we must do better. We might not be able to prevent future dam failures but we can make sure that our citizens and communities know their risk.

Are you an ASFPM member?

A respected voice in floodplain management practice and policy, ASFPM represents the flood hazard specialists working in local, state and federal governments, research community, insurance industry, and in the fields of engineering, hydrologic forecasting, emergency response, water resources, and others. [Become a member today!](#)

A Big Dam Problem

A rainstorm hit central Michigan beginning on Sunday, May 17. By 5:41 p.m. on Tuesday evening, the Edenville Dam was breached and residents were told to evacuate. Less than two hours later, it was announced that structural collapse of the nearby Sanford Dam in north-central Midland County was “imminent” and additional were evacuations ordered.

For many, flooding and dam failures while the country is grappling with a global pandemic was the worst case scenario we’ve been fearing all spring.

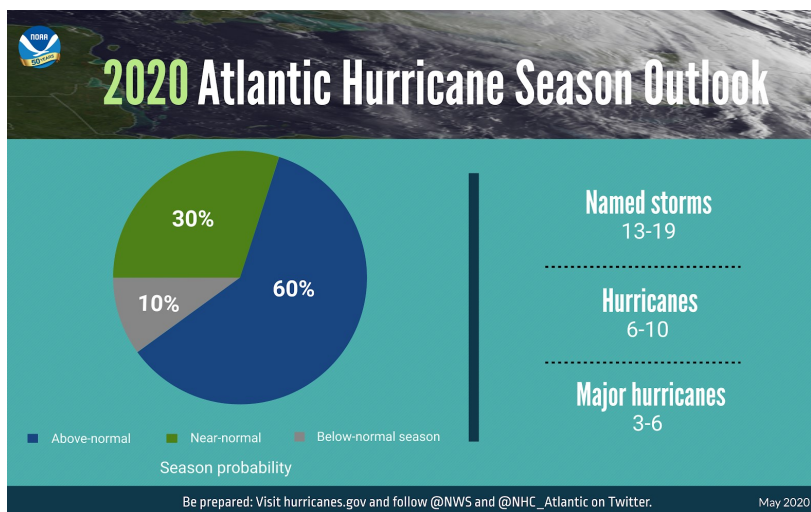


As the disaster was unfolding, our friends at American Rivers, took a look at what happened and how similar incidents could be prevented. [Read A Big Dam Problem: The Disaster in Michigan and Solutions for the Future.](#)

Busy Atlantic Hurricane Season Predicted for 2020

An above-normal 2020 Atlantic hurricane season is expected, according to forecasters with NOAA’s Climate Prediction Center, a division of the National Weather Service. The outlook predicts a 60% chance of an above-normal season, a 30% chance of a near-normal season, and only a 10% chance of a below-normal season. The Atlantic hurricane season runs from June 1 through November 30.

NOAA’s Climate Prediction Center is forecasting a likely range of 13 to 19 named storms (winds of 39 mph or higher), of which 6 to 10 could become hurricanes (winds of 74 mph or higher), including three to six major hurricanes (category 3, 4 or 5; with winds of 111 mph or higher). NOAA provides these ranges with a 70% confidence. An average hurricane season produces 12 named storms, of which six become hurricanes, including three major hurricanes.



[Read more about the Atlantic hurricane season outlook.](#)

Comprehensive Report Examines Rising Sea Levels in San Francisco Bay Area

By Mary Bart

The San Francisco Bay Area is the fourth largest metropolitan area in the country, with a population of 7.4 million people in the nine-county region. A significant proportion of the region's communities, job centers, and transportation infrastructure, among other critical assets, are located along the San Francisco Bay shoreline, which is at risk of flooding now or in the future due to climate change.

That was just one of the findings of **Adapting to Rising Tides (ART) Bay Area**, a report released in March 2020. ART Bay Area provides the first ever regional comparison of the impacts of rising sea level on the people, environment, and regional systems of the area.

The ART Bay Area report takes a data-driven approach to identify where the area is vulnerable and lays out a pathway to plan for the future. It outlines the worst-case scenario for impacts and consequences to four critical regional systems – transportation networks, vulnerable communities, future growth areas, and natural lands – for 10 different flooding scenarios ranging from 12" to 108" to show the wide range of consequences in the absence of action.

Comprehensive in scope, the 205-page report illuminates the shared vulnerability to rising sea levels and strives to create a range of outcomes that help build capacity and improve the resilience of the Bay Area transportation system, promote sustainable, safe and healthy communities, and increase participation of the socioeconomically vulnerable communities in the process.

It concludes with this call to action:

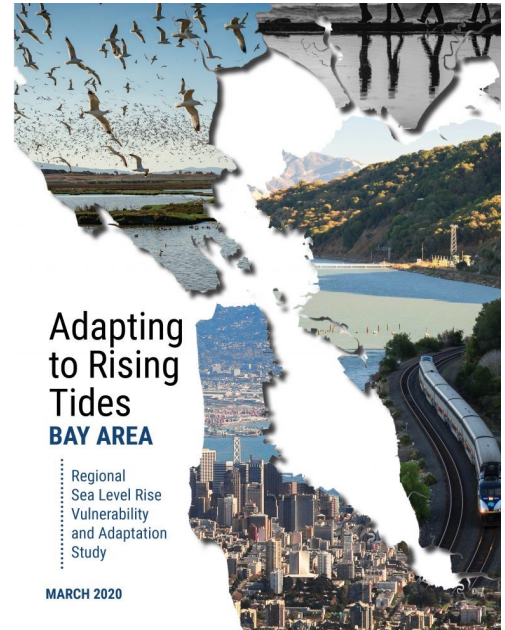
"We know that rising sea levels are coming. And we know what the potential impacts will be. What will catalyze us to action before people, the environment, the economy, and our infrastructure are extensively impacted? And what is the cost if we fail to act? ... The Bay Area is at a tipping point, poised between a growing body of information, tools, and awareness, and the beginnings of irreversible impacts, especially to sensitive shoreline ecosystems and our most vulnerable populations."

[Download the report.](#)

The Adapting to Rising Tides program also developed the interactive Flood Explorer website, which is intended to be used as a planning guide to understand where Bay Area shoreline is at risk from current and future flooding from sea level rise and storms.

[View the interactive map.](#)

ART Bay Area was developed to build upon several years of collaboration among local, state, and federal agencies, including the Bay Conservation and Development Commission (BCDC), California Department of Transportation, the National Oceanic and Atmospheric Administration, and the Federal Emergency Management Administration.



FEMA Helps Fund Dam Removal as Part of Innovative Public-Private Partnership

Built in 1904, Rattlesnake Creek Dam played an integral part of the water supply for the City of Missoula, Montana. But at more than a century old, the dam is no longer in use and is a potential hazard to its environment and local community. Without its removal, FEMA estimates Rattlesnake Dam could cause more than \$6 million in damages if it failed.

To tackle a project this large, the city formed a partnership with external organizations, such as Trout Unlimited, the Watershed Education Network, and the Montana Department of Fish, Wildlife and Parks. They've worked together over the past several years to prepare the dam for its removal, and the public-private partnership successfully applied for several grants from Patagonia, Northwestern Energy, and the Federal Emergency Management Agency (FEMA).

FEMA's Hazard Mitigation Grant Program is funding more than \$700,000 of the project that will go to the removal of the dam and the restoration and re-stabilization of the site. The program provides funds to states following a major disaster declaration, allowing them to fund projects that will minimize the impact of future disasters.



*Rattlesnake Creek Dam in Missoula, MT.
Photo courtesy of Trout Unlimited.*

The FEMA grant provides 75 percent of the needed funding to remove the dam, and the partnership has secured the remaining allocations. The city expects the dam to be officially removed during this summer. Rattlesnake Creek Dam is just one example out of hundreds of other barriers that pose potential risks to local communities. According to the Association of State Dam Safety Officials, 70 percent of dams will be past their 50-year life spans by 2025.



"It's important to identify opportunities where partnerships can really strengthen local communities," said FEMA Region 8 Mitigation Division Director Jeanine Petterson.

With the help of UC-Davis Center for Community and Citizen Science, the Rattlesnake Dam partnership will be turned into a model for future restoration efforts throughout the western United States.

The Center works to build capacity for local groups to monitor watersheds before, during, and after dam removal through a grant from the Open Rivers Fund. The Rattlesnake Dam removal will be highlighted as a successful example in their final report to help others with watershed restorations.

Policy Matters!

By Larry Larson, P.E., CFM

Director Emeritus – Senior Policy Advisor, ASFPM



No Pause on Policy During Pandemic

Does national flood policy stop during a pandemic? Definitely not. In fact, the administration, Congress, agencies, states, and others may use the current pandemic to make flood policy better or worse. We have seen agencies shorten time allowed for submitting comments on proposed policies and we have also seen agencies lengthen the comment period.

The Trump Administration has indicated it intends to move quickly on revoking or replacing a number of regulations so they cannot be readily rescinded by the next administration. That critical time is supposedly in early June, so there's a lot of this kind of activity right now on issues such as [WOTUS](#), clean water and clean air rules, etc. In another example, the administration has just issued a new [Executive Order](#) directing agencies to consider deregulatory actions that may spur economic growth.

While Congress has not been in session for much of the past two months, the staff has been very active in moving a number of bills of interest to ASFPM members. The Corps of Engineers Authorization bill (WRDA) is one such example. This bill not only authorizes the nation's big flood control projects you hear about, but it also sets policy for some continuing authority the Corps has for programs like Silver Jackets, Floodplain Management Services, and Planning Assistance to States, as well the authority for PL 84-99, the program that uses federal taxpayer funds to repair or rebuild levees that may have been damaged or washed out in a flood.

Since there were more than 100 levee failures in the Midwest in 2019, the Corps is rebuilding many levees. There is state and local pressure to build them even higher than they were authorized. We were pleased to see the General in charge of civil works for the Corps indicate they should not do that if the reconstruction would adversely impact other properties of communities across or up or down the river. We work closely with partner organizations on issues like these, including promoting more nature-based and nonstructural flood risk management by the Corps.

Atlas 14 is the National Weather Service playbook all of us who develop flood maps, mitigation projects, or infrastructure use to determine how much rainfall will occur in a 1% chance flood event. It is important the Atlas be updated for different regions in the nation every five years to ensure the calculations are accurate. This is especially important now when rainfalls are becoming more intense (witness the dam failure last month in Michigan). Obtaining a small amount of funding in the NOAA budget to make this happen is ongoing right now, in spite of the pandemic, because federal agency budgets must be passed by Congress every year—pandemic or no pandemic. This is true of funding for USGS stream gages, flood mapping, Digital Elevation Lidar, and others.

NFIP reauthorization is unlikely to move forward until after the election

On the other hand, the NFIP reauthorization will likely not move forward at all until after the November election. The reason is the big concern that Risk Rating 2.0 may result in significant increases in flood insurance premiums for some flood insurance policy holders. Because it's not known which properties will see those increases, members of Congress would likely prefer that kind of information comes to light after November.

So, as you can see, flood policy is not on hold during the pandemic. As always, ASFPM will endeavor to keep on top of all these important activities, make our voices heard, and keep you informed.

National Hurricane Center to Begin Publishing Storm Surge Maps

The National Hurricane Center is stepping up its warnings about storm surge and will start publishing maps this summer that show where tropical storms are likely to cause flooding along the Atlantic and Gulf coasts as well as Puerto Rico and the U.S. Virgin Islands.

E&E News reports that the new storm surge maps will highlight in red the coastal areas that face possible flooding and will show the expected height of the storm surge at numerous locations. The maps are meant to warn the public of a potential danger that is often overlooked as people focus on hurricane wind speeds and likely storm paths.



Many in the floodplain management field see the new maps as a positive step in the right direction as the maps will provide another layer of data to help inform decision-making by citizens and emergency agencies alike and should lead to more accurate evacuation timelines and safer routes.

Tom McDonald, CFM, co-chair of ASFPM's Coastal Issues Committee, likened hurricane information to an orchestra. "The more instruments added to the orchestra, the bigger sound," he said. "Such is the way with new technology and ways of displaying hazards. My hope is that one day we can provide enough hazard information that we can be compared to the 1812 Overture."

The hurricane center will publish the maps to its [webpage](#) roughly 48 hours before hurricane winds or surges are expected to hit. The maps will use data the hurricane center has long collected.

Self-Guided Training: Introduction to Lidar

Through our partnership with the NOAA's Office for Coastal Management (OCM), ASFPM has approved one self-study course for CEC credit at no cost. You must complete the final exam to receive your certificate for the course, which you will then turn in for CEC credit.

Access [Introduction to Lidar](#) on NOAA OCM's [Digital Coast Academy](#).

GAO Makes Recommendations on Improving NFIP Oversight and Data Sharing

By Mary Bart

A report from the Government Accountability Office (GAO) concluded that Federal Emergency Management Agency (FEMA) should do more to improve the community oversight and data sharing when it comes to ensuring compliance with the National Flood Insurance Program (NFIP). The [report](#) was released May 5.

Until 2019, FEMA's goal was to visit all communities considered to be high-risk every five years. However, the GAO found that FEMA did not meet this goal in Texas or Florida in 2008–2019 due to lack of resources. Many high-risk communities received only one visit in this period, and some were not visited at all. FEMA officials said that one reason for the limited number of visits to some high-risk communities is that FEMA resources, including state specialists, can be diverted to assist with disaster recovery efforts. Communities participating in NFIP must adopt FEMA floodplain maps, limit flooding caused by new development, and require that substantially damaged structures meet elevation requirements.

Community floodplain officials interviewed by the GAO cited such challenges as difficulty inspecting buildings after a flood, retaining experienced staff, and implementing new NFIP flood maps. Access to NFIP claims data was another challenge identified by those in communities visited, and one that's been of great concern to ASFPM. "That claims data is essential for communities to make substantial damage assessments," said Larry Larson, director emeritus and senior policy advisor with ASFPM.

According to FEMA guidance, the agency should provide local officials with information on their community that includes the number of flood insurance policies in force, dollar amount of coverage, and the number of claims. NFIP communities also can access information on publicly available data on claims payouts. However, some communities the GAO visited were unable to access claims data.

FEMA officials acknowledged confusion among communities concerning access to NFIP claims data, according to the GAO report, and said they have been working to address it; noting that they must ensure compliance with the Privacy Act of 1974, under which the agency can share certain data only with organizations that have a programmatic need for the information.

Much of this leaves state coordinators with a mandate to do a job, but not the authority or tools to do it properly, said Steve Samuelson, CFM, an NFIP Coordinator in Kansas who is also heading up a group tracking the privacy issue for ASFPM. If they had access to claims data to assist with enforcement, coordinators could compare data to floodplain permitting and damage estimations to know whether a community had made a good effort to enforce substantial damage requirements. But the Privacy Act prevents that from happening, he said, because insurance claims are considered personal information.

"Even telling a community that the house at a certain address had a claim would not be allowed because if you know an address, you can easily find out who owns that house," Samuelson said. "A cluster of addresses in an area would be a good indicator to look at all the addresses in that area for potential damage but we can't share address information with communities."

Lastly, in addition to inadequate community assistance visits to monitor compliance with NFIP requirements, the GAO found that records of visits were not being closed out in a timely fashion. In Florida and Texas, records for many visits remained open for several years, and FEMA staff were unsure whether this indicated unresolved deficiencies or incomplete recordkeeping.

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GAO Recommendations

As a result of the report, GAO is recommending FEMA take the following executive actions:

- **assess** different approaches, in addition to community assistance visits, for using existing resources to ensure communities' compliance with NFIP requirements. This should include analyzing alternatives to community assistance visits.
- **identify** appropriate steps to ensure it has complete, up-to-date, and reliable records of community assistance visits, including information on why some visit records remain open for a significant period of time
- **ensure** that communities are consistently collecting data on their substantial damage assessments and that FEMA has a way to readily access those data to evaluate community compliance with NFIP requirements for rebuilding substantially damaged properties.
- **clarify** with NFIP communities its policies on sharing data on NFIP claims and provide such information to those communities as needed.

[Read the full GAO report.](#)

CRS Report on Flood Risk Reduction from Natural and Nature-Based Features

By Mary Bart

As the primary federal agency involved in construction projects that help reduce community flood risk, the U.S. Army Corps of Engineers (USACE) has seen increased requests from Congress and other stakeholders to consider natural and nature-based features (NNBFs) as part of the nonstructural alternatives. Examples of NNBFs for reducing flood risk include, wetlands; oyster, mussel, and coral reefs; and the combination of these natural features with hard components, such as rock and concrete.

A new report from the Congressional Research Service (CRS) introduces NNBFs in the context of USACE flood risk reduction activities. The report— **Flood Risk Reduction from Natural and Nature-Based Features: Army Corps of Engineers Authorities**—begins examines how NNBFs relate to USACE authorities for structural and nonstructural measures. It next discusses the primary flood-related activities for which USACE has NNBF-related authority: (1) federal flood risk reduction projects and (2) a program for the repair of damaged nonfederal flood control works. The report then addresses challenges and opportunities for use and incorporation of NNBFs within USACE's flood risk reduction and resilience efforts.

The report concludes with questions relevant to the future of use of NNBFs as part of USACE's flood risk reduction activities:

- What are the remaining knowledge gaps regarding the benefits and limitations of NNBFs in flood risk reduction? What are the options for decision-makers to direct USACE or other federal agencies to address these gaps or otherwise support research that addresses these gaps?
- What is the impact of current decision-making processes on the accounting of NNBFs' benefits, costs, and performance over time?
- How do statutes, Administration guidance, and agency practice create disincentives and incentives for NNBF adoption for USACE and nonfederal project sponsors?

[Read the full report here.](#)

How States Pay for Natural Disasters

As disasters become more expensive, frequent, and severe, states are under increasing pressure from federal policymakers—who are seeking to manage their own rising costs—to invest more in emergency management capabilities, fiscal reserves, recovery programs, and cost-saving mitigation activities. These ongoing state and federal policy discussions have intensified the need for policymakers at both levels to understand the budgetary tools that states rely on to make sure funds are available when it matters most.

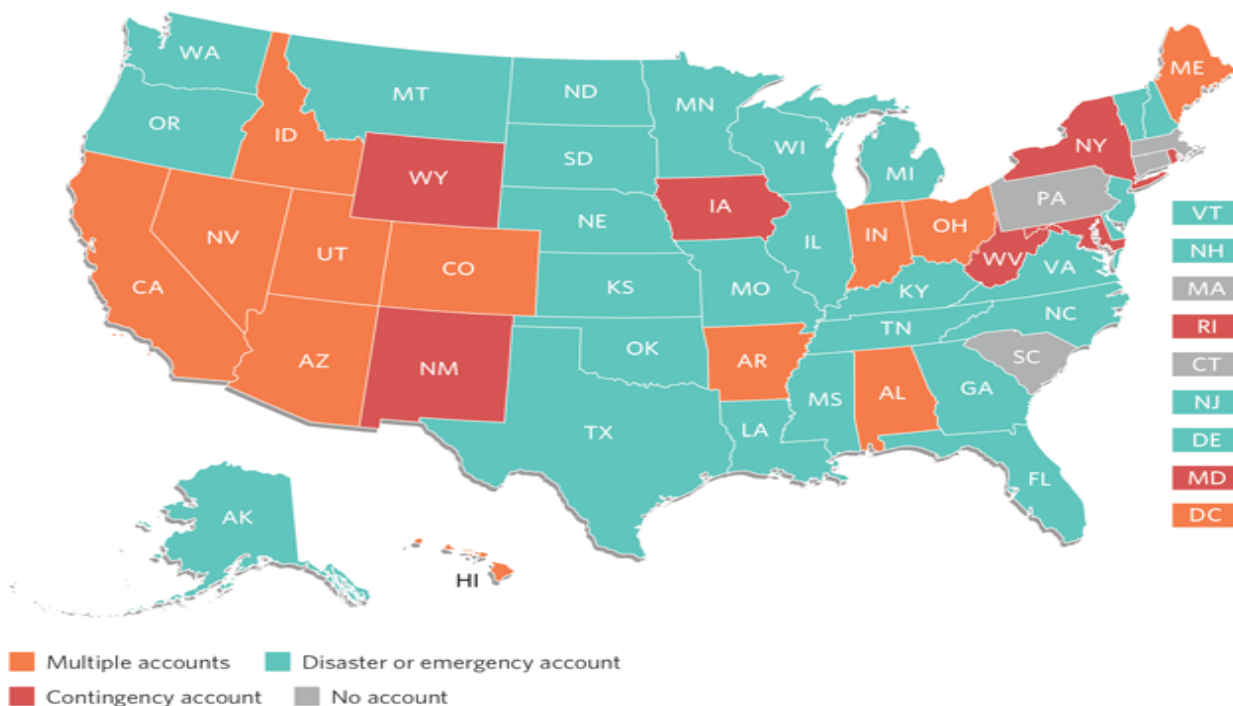
To help policymakers better understand how states manage these unpredictable and growing costs, The **Pew Charitable Trusts** assessed states' use of five budgeting tools that the Government Accountability Office and previous Pew research had identified as common natural disaster-funding mechanisms: statewide disaster accounts, rainy day funds, supplemental appropriations, transfer authority, and state agency budgets. The researchers also looked at states' use of insurance to protect themselves from losses associated with damage to their own property and assets. [Here's what they found.](#)

Meanwhile, in a 2018 report, Pew explained how neither the federal government nor the states do a very good job tracking their mitigation spending. Researchers concluded that all levels of government need a more comprehensive understanding of federal and state investments in order to better target funding to help manage the growing costs of catastrophic events. [Read the 2018 report.](#)

Figure 2

Most States Have a Specific Disaster or Emergency Account

Accounts by type and state



Notes: A disaster or emergency account has disaster or emergency as its named purpose, a contingency account holds money set aside for costs that are difficult to predict, and "multiple accounts" refers to the state's having more than one statewide disaster account. No account: State does not have a statewide disaster account.

Sources: Pew's analysis of data from the National Association of State Budget Officers, "Budget Processes in the States" (2015), <https://www.nasbo.org/reports-data/budget-processes-in-the-states>; state statutes, constitutions, and websites; and correspondence with state budget offices

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Flood Insurance Advocate Annual Report Released

By Bruce A. Bender, CFM

The [Office of the Flood Insurance Advocate](#) released the [2019 Annual Report and Executive Summary](#) which increases transparency and supports the ongoing improvements to the National Flood Insurance Program.

In 2019, five primary policyholder and property owner concerns or frustrations have been identified and include recommendations to address and resolve the matter. These include:

- Improper application of an elevation rating using an elevation certificate
- Loss of flood insurance policy rating discounts following a lapse in coverage
- Confusion regarding the Group Flood Insurance Program
- When a policyholder has received a "Letter of Map Amendment, Out as Shown," limited refunds has been issued
- When a permit is issued before a substantial damage letter is received by the policyholder, this causes a denial of Increased Cost of Compliance funds



The OFIA has proactively identified emerging issues requiring more analysis for 2020:

- Rate Changes: Risk Rating 2.0
- Elevation Certificate Requirements for Flood Insurance
- Flood Insurance Disclosure During Property Transfer
- Underserved and Socially Vulnerable Populations
- Affordability of Flood Insurance for Policyholders as rates increase

These [fact sheets](#) provide information on the Office of the Flood Insurance Advocate (OFIA) and resources to learn about components of the National Flood Insurance Program (NFIP).

Force Placement Extension Clarified

Recently, FEMA issued a [WYO Bulletin](#) extending the 30-day Grace Period for payment of flood insurance premiums. Basically, if a policy has an expiration date between February 13, 2020, and June 15, 2020, then the NFIP insurer must receive the appropriate renewal premium within 120 days of the expiration date to avoid a lapse in coverage.

This extension though has created some confusion with lenders as it appears to them that the policy has lapsed and there is no coverage. So, to be in compliance with the mandatory purchase requirement, lenders have been force-placing flood insurance.

FEMA has been working with lending regulators to address this confusion and concern and have reached a resolution. An FAQ on flood insurance force placement/FEMA grace period extension is now published in the FDIC's COVID-19 FAQs. [See page 16, FAQ #30](#). The extracted wording can be found [here](#).

NEWS BRIEFS

Agency updates, grant deadlines & the latest curated news

FEMA Preliminary Damage Assessment Guide

FEMA announced the release of the agency's updated *Preliminary Damage Assessment Guide* (PDA Guide) and its accompanying *Preliminary Damage Assessment Pocket Guide* (PDA Pocket Guide). The PDA Guide will be effective on June 8, 2020 and will have a one-year public comment period until June 8, 2021. [Learn more.](#)

NFIP Claims Manual (May 2020)

This manual improves clarity of flood insurance claims guidance to NFIP Write Your Own (WYO) companies, flood vendors, flood adjusters and examiners, so that policyholders experience consistency and reliability of service. [Learn more.](#)

High Hazard Potential Dam Grants from FEMA

FEMA released the Rehabilitation of High Hazard Potential Dam Grant Program Notice of Funding Opportunity. The grant program provides technical, planning, design and construction assistance in the form of grants for the rehabilitation of eligible high hazard potential dams. Eligible applicants must be non-federal sponsors, which include non-federal governments and non-profit organizations.

Grant amounts: Up to \$10 million appropriated for FY2020

Deadline: June 26, 2020

[Learn more about high hazard dam grants.](#)

NEP Coastal Watersheds Grant Program

The National Estuary Program (NEP) Coastal Watersheds Grant (CWG) Program has issued its first request for proposals. The newly created, nationally competitive grants program is designed to support projects that address urgent and challenging issues threatening the well-being of coastal and estuarine areas within determined estuaries of national significance. Restore America's Estuaries will be administering the NEP CWG Program in cooperation with the U.S. Environmental Protection Agency.

Grant amounts will range from \$75,000 to \$250,000

Deadline: August 7, 2020

[Learn more about the CWG program.](#)

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App Shows Storm Surge Damage Before Flooding Begins

A new [augmented reality app](#) developed by the University Corporation for Atmospheric Research's COMET Program can educate users about how storm surges form. But the real advantages of the app include the ability to virtually explore a house that is flooded at different levels, see how storm surge would look in a city from a bird's eye view, experiment with using sandbags to hold back floodwaters, and even point your camera at your own house or other surroundings with superimposed floodwaters. ASFPM's own Chad Berginnis and Larry Larson are interviewed about the app for this article. [Read more.](#)

Fortress Charleston: Will Walling Off the City Hold Back the Waters?

Officials in Charleston, S.C. have endorsed a \$2 billion plan to wall off the historic downtown from rising seas and surging storms. It is the latest in a growing number of extravagantly expensive seawalls and barriers being proposed to defend U.S. coastal cities. [Read more.](#)

Water Monitoring Project Makes Savannah a World Leader

Georgia is home to more than 40 sensors that keep track of the rise and fall of sea levels in Savannah and Chatham County. According to one expert, thanks to the Smart Sea Level Sensors partnership program, Georgia now has the highest density of water monitoring sensors anywhere in the world. [Read more.](#)

U.S. Virgin Islands Face Tough Choices

It may take another year or more, but the U.S. Virgin Islands is moving to identify public and private properties that lie in its mega-sized flood zone. Then all it will have to do is decide whether (and how) to protect individual structures or whether (and how) to remove them. [Read more.](#)

Removing Homes from Flood Zones Could Save \$1 Trillion

The U.S. could save more than \$1 trillion over the long term by removing roughly 1 million homes from flood-prone areas and relocating residents to higher ground, according to a massive new study funded by the government. [Read more.](#)

Battered by Floods, U.S. River Communities Try New Remedies

Floods in the Missouri, Mississippi and Arkansas river basins caused \$20 billion in damage in 2019, the second-wettest year on record. But the floodplain awaiting this year's storms is part of a changing picture, altered from just a few decades ago. It is now dotted with more parks, marshes and forests on land surrendered in recent years by communities and individuals. Some experts envision this expanding green patchwork as a promising model for relieving pressure on a river system that can no longer stay in its man-made channels. [Read more.](#)



Proud to Announce This Year's Rocky Mountain Environmental Hazards Challenge Winner

Brad Anderson, ASFPM Foundation Projects Chair, worked in partnership with Tony Mendes, FEMA Region VIII, and Vince Meldrum, Earth Force, to review and judge proposals submitted by nine Colorado middle and high schools for this year's Rocky Mountain Environmental Hazards Challenge (RMEHC). Brad's extremely rewarding experience last year made it clear ASFPM Foundation's support of RMEHC would continue.

"The innovation and creativity of middle school and high school kids I witnessed throughout this process is nothing short of inspirational — with talent like this, our country's future in managing flood risk and other hazards is bright!" said Brad.

Blevins Middle School, of Fort Collins, Colorado, took first place in the 2020 Challenge. Their entry proposed a community awareness event to encourage students and their families to create family emergency plans. [Click here](#) to view the five schools announced as this year's winners.

RMEHC is an annual competition sponsored by Earth Force and FEMA Region VIII that combines project-based learning with the latest research in STEM education. Student teams from schools across Colorado submit a project that applies real-life solutions to local natural hazard risks in their community for a chance to win prize money to fund their project. Prizes range from \$1,000 for the first place winner to \$200 for the fifth place finalist. All prize money was donated by ASFPM Foundation.

The ASFPM Foundation, in partnership with FEMA Region VIII and Earth Force, are proud to announce the **2020 1ST PLACE WINNER** of the Rocky Mountain Environmental Challenge



BLEVINS MIDDLE SCHOOL

CLICK HERE TO VIEW THE FIVE SCHOOLS ANNOUNCED AS WINNERS IN THE ROCKY MOUNTAIN ENVIRONMENTAL CHALLENGE

To learn more about the Rocky Mountain Environmental Hazards Challenge visit <https://earthforce.org/rmehc-info/>



Earth Force is the driving force behind RMEHC. Established in 1994, its mission is to "engage young people as active citizens who improve the environment and their communities now and in the future." Imagine "a world where everyone has the knowledge and skills they need to participate in environmental decision making in their community."

Through programs like the Rocky Mountain Environmental Hazards Challenge, Earth Force is well on its way to achieving its vision through early engagement with today's youth for a resilient and sustainable future.

ASFPM Foundation is currently working in partnership with FEMA and Earth Force to expand this challenge to additional school districts in other FEMA Regions. Learn more about the [Rocky Mountain Environmental Hazards Challenge](#).

Member News

Siavash Beik, principal engineer at Christopher B. Burke Engineering, was recently named one of the 2020 Hoosier Resilience Heroes by Indiana University's Environmental Resilience Institute. Siavash, the founding chair of the Indiana Association for Floodplain and Stormwater Management, was recognized for his work as a longtime advocate for resilient infrastructure design and sustainable floodplain management in Indiana in anticipation of growing populations and increasing flood risks associated with climate change. He also has published a number of technical guidebooks on sustainable practices and volunteers extensively in the community to help the general public promote community resilience and preparedness.

Mary Fran Myers Scholarship - Congratulations of this year's recipients of the Mary Fran Myers Scholarship, named in honor of the late longtime ASFPM member and Natural Hazards Center co-director. The scholarship recognizes outstanding individuals who share Myers' passion for disaster loss reduction nationally and internationally. You can read about the winners [here](#).

Paul Osman, chief of statewide floodplain programs for the Illinois Office of Water Resources, was interviewed for a recent *Chicago Tribune* article titled More rain, more floods, more often. Why wet basements and swollen rivers are becoming the new spring reality for Illinois. "It's driving me nuts that climate change has become a dirty word, that climate change has become so political," he is quoted as saying. "It's science. It's data. It's happening, I'm sorry. You can't argue with thermometers, rain gauges or river gauges. They are all increasing every single year." Read the article [here](#).

Gone But Not Forgotten . . .

The following ASFPM members and leaders in floodplain management passed away in April. Our hearts are with their families as we take a moment to appreciate their decades of contributions to reducing flood damage in the nation.

John Fullerton of Wilmington, NC. John was a major influence and supporter of the North Carolina Association of Floodplain Managers, where he served as chair in 2012. He was also an advocate of the CFM program and floodplain management for over 20 years. His positive outlook and charm made him an inspiration and immediate friend to everyone he met.

R. Dell Greer, 84, of Arlington, Texas, Dell started his career with the US Army Corps of Engineers before moving on to HUD. He later started the first Region 6 office for FEMA in Denton where he retired after 27 years. After retirement he began working part-time at Freese and Nichols and with the Texas Division of Emergency Management. Dell loved his career because he did not view it as engineering, but as an opportunity to serve others. He worked every federal disaster that occurred in TX and OK through 2010.

Jim Wright, 82, of Knoxville, TN and Catawba, VA, is the author of an ASFPM book titled [The Nation's Responses to Flood Disasters: A Historical Account](#), which he wrote in 2000. Jim began his career as a water resources engineer in the Flood Control Branch of the Tennessee Valley Authority (TVA) in Knoxville, TN. He later worked for the Wisconsin Department of Natural Resources and the Minnesota Department of Natural Resources, assisting communities with solutions to local flood problems and developing what would become a national model for floodplain management. He returned to the TVA in 1978, where he remained until 1994 carrying out the same type of work for the federal government that he had done for the states of Wisconsin and Minnesota.

Jim was a great supporter of ASFPM over the years and was instrumental in making sure the Federal Interagency Floodplain Management Task Force (FIFM-TF) updated the Unified National Program for Floodplain Management (UNP).

Apply Now for the 2020 CTP Summer Special Topics Course at EMI

If you are a newer CTP, new to a CTP organization, or simply need a refresher, this summer's Special Topics course is a great opportunity! You are invited to join the Federal Emergency Management Agency (FEMA) Cooperating Technical Partners (CTP) summer training course at the Emergency Management Institute (EMI) in Emmitsburg, MD.

The four-day course, hosted **Monday, August 3 – Thursday, August 6, 2020** will provide training on communications and outreach strategies related to the Risk Mapping, Assessment, and Planning Program (Risk MAP). To apply, you must work for an organization that is currently a CTP. If your organization is interested in becoming a CTP, please reach out to your Regional FEMA office.

The deadline for registration is Friday, June 5, 2020. Admission spots are limited and available on a first-come-first-serve basis, so candidates are encouraged to apply for a pre-approval letter at your earliest convenience. To do so, please follow these steps:

1. Complete the eligibility questions using this [link](#) to qualify for a pre-approval letter.
2. If approved, you will receive a pre-approval letter and you must apply directly to EMI by Friday, June 5, 2020 and attach your pre-approval letter to your online application.

During the training, participants will:

- Learn the CTP grants management process, including grant compliance and the grant life cycle;
- Identify how best to engage communities throughout the Risk MAP process in order to encourage better disaster-related human behavior;
- Learn best practices for communications and outreach using Flood Risk Products and Story Maps;
- Engage with experts with extensive knowledge on their topics;
- Meet experienced CTPs and build your professional network;
- Learn about CTP opportunities.

For more information about the course, contact CTPAdmin@riskmapCDS.com or Laura Algeo, National CTP Program Coordinator, Laura.Algeo@fema.dhs.gov.



Do you have a story or important news announcement you'd like to share with ASFPM newsletter readers?

Email us at editor@floods.org.

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