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## ASFPM and NRDC File Petition to Strengthen NFIP Minimum Standards

On January 6, ASFPM and the Natural Resources Defense Council (NRDC) delivered a [petition](#) to FEMA requesting that FEMA update the agency's rules for building and land-use in the nation's floodplains, and to develop and make available flood maps that project future flood risk. This petition was filed under the federal Administrative Procedures Act (APA), which allows any interested party to request an agency to issue, amend, or repeal a rule. The NFIP minimum standards are technically considered federal "rules" found under Title 44 of the Code of Federal Regulations. It is hoped that FEMA will have a favorable response to the petition request that will serve to initiate the rulemaking process.

We sat down with Chad Berginnis, ASFPM Executive Director, for a brief question and answer session on the petition.

### **Question: Why seek a change to the NFIP building and land-use standards through a petition for rulemaking?**

Answer: The beauty of such a petition is that it is an avenue available to any party to ask an agency to look at rules. And while it is an official legal filing, it is not a lawsuit.

When you look at the NFIP minimum standards they are old, as in decades old. The last change to them was in the mid-1980s when the concept of "substantial damage" was added but you have to go back to the 1970's to find the last major update. There has been talk among the practitioner community about updating the NFIP minimum standards for at least 20 years. One of the documents in our library is a June 2000 [call for issues report](#) by FEMA recommending several changes to the NFIP minimum standards. ASFPM's master policy document, [National Flood Policies and Programs in Review](#), has long included proposals to strengthen the NFIP minimum standards as well. In fact, the petition cites several FEMA documents, including Mitigation Assessment Team (MAT) reports which are developed after flood events, that recommend higher standards among other things.

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**Q: Why file the petition now?**

A: It's a matter of public safety. Flood losses are increasing dramatically and we need the national standards to catch up. We have seen a rough doubling of flood losses every decade since the 1990s where now flood losses in the nation are averaging at least \$17 billion per year. Unfortunately, looking forward, those losses will only worsen due to climate change. Those losses – and the misery that comes with it – are unacceptable. Something has to change.

NRDC and ASFPM had been working on the petition for several months without any preconceptions of the 2020 election outcome. However, given the election outcome, we certainly hope the Biden administration will recognize the threat flooding presents to our communities and be inclined to act. Certainly, President Biden's reinstatement of Executive Order 13690 and bringing back the Federal Flood Risk Management Standard is a positive sign of things to come.

**Q: What happens if FEMA grants the petition?**

A: If FEMA grants the petition they will initiate rulemaking that will be open for public comment. Our organizations will strongly advocate to ensure that the proposed rulemaking is adequate not only to better protect people from current and future flood risk but also to ensure that those most impacted by flooding are part of the process to reform the NFIP.

**Q: Are there the proposed changes ASFPM and NRDC are seeking?**

A: In the broad sense, we are wanting to see stronger construction and land-use standards, and adequate mapping of future flood conditions. Specifically, there are a number of areas we point to that can be improved:

- Requiring new flood protection elevation to a level higher than the base, or 100-year flood.
- Include higher standards for critical facilities and actions.
- Significantly strengthen subdivision standards which, in my opinion, are the weakest of the existing standards. When you think about it, subdivision standards are those that focus on land use and that is where we fall short nationally. Land use encompasses a variety of things, including where we put houses, businesses, and public buildings, where we locate and how we build new infrastructure, where/how we construct stormwater management features, and how we set up owners' associations that will have responsibilities for managing key infrastructure in a subdivision. Given that nearly all new homes and businesses these days are located in subdivisions, if we figure out how to strengthen the NFIP's subdivision requirements, it will have a significant impact on reducing disaster losses in the future. ASFPM, in partnership with the American Planning Association, undertook important research and produced a report in 2016, [PAS 584](#), that identifies and recommends more than 60 higher standards that could be incorporated into a community's subdivision regulations. We know there is vast room for improvement to the NFIP minimum standards.

**Q: What about the argument that this will increase the cost of housing?**

A: Affordable housing shouldn't mean a cheaply built house in an unsafe place. The cost of ensuring a house is built to a higher flood resilience standard is far less expensive in not only cost, but suffering and downright misery, than the cost to property owners and taxpayers when the home is flooded again and again.

Also, we shouldn't get fixated on the argument that extra freeboard or a higher flood protection elevation will cost more in constructing the house. How many people pull out a big wad of cash and pay for their entire house up front? Most people I know finance their house and the most important thing to them is the monthly cost of ownership (house payment) that includes the principle on the loan, interest on the loan, and the cost of insurance. Based on calculations we have done, in both A and V Zones, it is cheaper to build an elevation above the 100-year flood based on that monthly cost of ownership due to significant flood insurance savings. So it's not only safer, but it is also cheaper to own the more flood protected house.

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## Petition Q&A

### **Q: What happens next? When?**

A: First, FEMA must evaluate the petition and determine whether they will grant or deny it. If they grant the petition, then they will gear up for rulemaking. The rulemaking process itself will take time because typically an agency would prepare a proposed rule, solicit comments on that rule, adjudicate those comments, and issue a final rule. At a minimum, we are looking at a multi-year process.

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For more on the topic, please read a recent NRDC blog post by Joel Scata as he explains the importance of the stronger standards to protect people and property from flood risk. The post is titled [Outdated Federal Flood Standards Put People at Risk](#).

News of the petition broke on the New York Times on January 6. Read that story as well as other coverage of [ASFPM in the News](#).

## ASFPM Flood Science Center Welcomes Jenna Moran

ASFPM is pleased to introduce readers to our new senior project manager. Jenna Moran is part of the Flood Science Center team which works to provide access to tools, data, and resources that help advance the science of floodplain management. Jenna is currently focused on a project that aims to develop an online flood mitigation library to better inform property owners on the array and selection of proper mitigation options for their properties. She also manages the internal administration of the organization's Federal Emergency Management Agency cooperative agreements.

Before coming to ASFPM, Jenna was the associate program director for resilience at the National Association of Counties, where she handled grants and initiatives relating to resilience and community and economic development. Before transitioning into the world of resilience, she worked in arts and culture as a stage manager and a design program specialist at the National Endowment for the Arts. Jenna holds a master of public administration from The George Washington University and a bachelor of arts from the University of Notre Dame.



Jenna Moran

In her free time, Jenna enjoys reading and hanging out with her two cats. She also loves to visit family and take road trips and hike through new landscapes across the United States, particularly out West. She says you just don't get a feel for the country when you fly like you do when you hit the open road.

**Correction:** In the Jan. 21 ASFPM Member Alert about President Biden's executive order to re-establish the flood risk management standard, we listed the wrong EO number in the second paragraph. It should read: The pertinent section of EO 13807 revoking EO 13690 is in Section 6. [This link](#) takes you to the now reactivated EO 13690, which ASFPM strongly supports.

# Report Finds Income and Racial Disparities in Disaster Aid

By Mary Bart

A report by FEMA's national advisory council acknowledged that government disaster aid does not target those in greatest need of help and in fact exacerbates inequity by enriching affluent areas and shortchanging low-income and minority communities.

"By perpetually assisting larger communities that already have considerable resources, the smaller, less resource-rich, less-affluent communities cannot access funding to appropriately prepare for a disaster, leading to inadequate response and recovery, and little opportunity for mitigation. Through the entire disaster cycle, communities that have been underserved stay underserved, and thereby suffer needlessly and unjustly," the report states.

The report then cites research conducted by sociologists Junia Howell and James Elliott, who tried to measure the effects of natural hazard damages and the resulting social and wealth inequalities experienced post hazard. [Their findings](#), published in 2018, indicated that, "holding disaster costs constant, the more Federal Emergency Management Agency money a county receives, the more whites' wealth tends to grow, and the more blacks' wealth tends to decline, all else equal. In other words, how federal assistance is currently administered seems to be exacerbating rather than ameliorating wealth inequalities that unfold after costly natural hazards."

FEMA has the opportunity to improve access to and minimize the complexity of programs by looking at how disaster relief programs are delivered and make those changes necessary to distribute support in a more equitable way.

Here are the seven recommendations put forth in the report for ensuring equity across FEMA programs, policies, practices:

- Create an equity standard and prioritize resources and programs to communities and individuals with the greatest need.
- Direct mitigation and preparedness funds to improve equity in outcomes. This would require state, local, tribal, and territorial (SLTT) emergency management agencies to identify culturally, economically, and socially at-risk communities to assure equitable planning, preparedness, mitigation and, recovery outcomes.

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Texas National Guard responds following Hurricane Harvey  
(Photo by [Ssg. Tim Pruitt](#) via Flickr).

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- Improve cultural awareness in FEMA employees. This would entail initial onboard training and ongoing continuing education for all employees, starting with leadership. The cultural awareness training program should have performance metrics to assess effectiveness and impacts through internal assessments and external feedback.
- Ensure the FEMA workforce reflects the populations it serves with an emphasis on diversity, equity, and inclusion at all levels.
- Measure social capital and work to increase it, including overall trust in institutions, analysis of social norms and social equity, and the strength of networks between partners critical to emergency management.
- Include social capital in training programs by integrating the three primary components of social capital (building trust, understanding social norms and cultures, and expanding networks) into all relevant FEMA curriculum by the end of 2022.
- Address Native American tribal concerns and work to understand emergency management capacity in tribal nations, including the number of full-time emergency management staff in each tribal nation, their grant management capacity, their planning capacity, and other key resilience factors.

ASFPM's newly formed Social Justice Committee applauded the council and report. The committee also noted that these recommendations really apply to all of our local, state, and federal partners—and should be integrated across the floodplain management profession more broadly.

In addition to the strong emphasis on equity issues, the 52-page report also addresses a number of key challenges and offers recommendations to improve disaster planning and response. Among the recommendations, a formal review and gap analysis of the areas of responsibility of FEMA regional offices versus FEMA headquarters, with a goal of delegating authority, resources, and decision making as close to the local level as possible.

Larry Larson, ASFPM's senior policy adviser, commended the NAC and FEMA Administrator Pete Gaynor for acknowledging the social equity problem of disaster aid and for taking steps to address it. He also suggested that FEMA has limited capability to work with 25,000 communities which all work under different state laws and might find it more effective to work to build state capabilities for tackling these issues and then have the states work with the local officials in carrying out the initiatives.

"That would mean grant programs must somehow incentivize states to take the lead on disasters—which was what the disaster deductible concept was about," he said.

The report also calls for a more streamlined approach to funding so as to "reduce the cost, complexity and burden on SLTTs of accessing and implementing federally funded resilience and readiness programs."



Hurricane Sandy aftermath. Photo by [Pam Andrade](#), via Flickr

[Download the full report](#)

[Read more coverage of the report](#)

# Policy Matters!

By Larry Larson, P.E., CFM  
Director Emeritus – Senior Policy Advisor, ASFPM



## Looking Ahead

The week I am writing this is the week Joe Biden takes over as the 46<sup>th</sup> President of the United States. What that means for members and leaders of ASFPM is that we will have an entire new set of federal agency leaders working with the programs that affect all of us as well as our communities, states, tribes, and territories throughout the nation. We will provide them information on which programs are working to reduce flood losses, protect ecosystems, and deliver economic benefits to property owners and taxpayers through community resilience and disaster reduction.

ASFPM will be providing this information to the Biden team beginning this month and continuing throughout the coming year. We will also be offering suggestions to the Congressional Committees that deal with agencies and programs our members help administer in the field or where their communities are impacted. Our recommended priorities build off the [National Flood Programs and Policy in Review](#) document that the ASFPM Board has approved.

Those priorities include actions like Biden took on his first day in office with an Executive Order to re-establish the flood risk management standard so that whenever federal taxpayer funds are used to build or rebuild infrastructure or buildings, a stronger, more-effective flood damage resistant or avoidant standard is applied and the taxpayers don't end up rebuilding those same facilities again and again. (See Section 7b of the EO on [Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis](#), which revokes Trump's 2017 EO 13807). Not only does that save communities and taxpayers money, it leads to more resilient communities. This is all the more important as we deal with increasing storm intensities, rainfall, and sea-level rise from climate change. Another priority is to make sure federal agencies and programs use solid science and fully consider future conditions in mapping, risk assessment, risk management, and in mitigation of flood hazard risk.

We foresee a busy, formative year, and we urge all of our members and leaders to engage with us to achieve our important mission.

A third priority will address the need for federal agency collection and dissemination of hazard data used by communities and states in mapping, managing, and mitigating hazard risk. Data collection and dissemination is an appropriate federal activity for ensuring all communities applying for disaster assistance, development regulation, and mitigation funding are on a level playing field. It ensures consistency of data and fairness in providing federal assistance. This includes stream gaging and precipitation data as well as LiDAR geospatial and elevation data for the nation.

Better management of disasters is needed. As disaster costs are greatly increasing, it is essential we improve how to better manage those disasters. Federal and academic reports indicate some larger cities may have staff and expertise to manage significant disasters, but that's often not the case for smaller communities and rural areas. We do not believe it is logical to think a federal agency can provide assistance to 22,000 plus communities, all of which operate under a different set of state laws regarding how they can manage land and development. We believe it makes more sense to strengthen and build the capacity at the state level so that states can provide tailored assistance to their communities.

The nation must ensure that disaster response and mitigation programs better serve economically-disadvantaged and vulnerable communities with a focus on assuring that non-structural, nature-based, and green infrastructure solutions are competitive in the process. This should include a look at the current benefit/cost evaluative tools to improve equities in economic and environmental applications.

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Providing strong White House leadership and oversight for federal agencies with roles in promoting climate resilience is essential. This includes ensuring collaboration with states, locals, tribes and territories, and well as with NGOs representing those who manage various aspects of hazard risk and disasters.

Finally, ASFPM urges the new administration to support green infrastructure, natural features and nature-based approaches across all federal agencies to mapping, managing, and mitigating flood risk and ecosystem health.

ASFPM also will be talking with Congress on the need for key legislative actions in the coming year. As you know, the NFIP authority expires on Sept. 30, and many other federal programs will need updates and some revisions. We foresee a busy, formative year, and we urge all of our members and leaders to engage with us to achieve our important mission.

## Flood Case Law Study Released

*By Austin Perez*

As flooding grows worse in both coastal and inland areas, the National Association of Realtors (NAR) commissioned the Legal Research Center to compile [flood-related court cases](#) over the past two decades to help identify key patterns and takeaways for NAR members as they fulfill their fiduciary duties to clients.

This research could help inform state efforts to strengthen existing property condition disclosure requirements. In addition, NAR Legal Affairs has developed guidance with best practices for flood disclosures; [watch this video](#) to learn more.

Of over 4,500 potentially relevant reported cases from 2000-2020, 61 cases were specifically related to flooding and included the real estate licensee or brokerage. Most were brought by buyers against the sellers' agent/brokerage and typically alleged fraud, breach of fiduciary duty, negligent and/or intentional misrepresentation or omission, as well as violations of state consumer fraud or unfair trade practices laws.

Nearly all 61 cases reached the appellate court stage. Appellate courts affirmed lower court decisions in favor of the licensee defendants in roughly half (29) of the cases but reversed/remanded in 18 others, allowing plaintiffs' claims to continue. In six cases, there was a significant verdict and award against the licensee/brokerage. The study includes a brief summary for each case as well as a link to the decision where available.

While this compilation includes only a subset of the court cases since 2000, it provides a solid starting point and glimpse into the types of cases that licensees/brokerages have experienced. Possible areas for further research include federal court decisions, administrative actions and litigation that is currently in process but has not yet reached a state appeals court. NAR will pursue additional research as needed.

[View the compilation of flood-hazard related cases.](#)

*Reprinted with permission from [NAR's Washington Report](#).*



# 2021 ASFPM Conference is Going Virtual



As we announced in our Jan.18 email alert, we have decided to move the **2021 ASFPM Annual National Conference to an entirely virtual event**. Along with all of you, we had hoped the situation with the COVID-19 pandemic would improve and we might see some signs of a return to normalcy. Unfortunately, at this point, we believe not enough will change in order to allow us to meet safely in-person the first week of May.

Although this was not an easy decision, we are confident that this is the right way forward. The health and safety of our members and attendees is our number one priority — and the best way to ensure that safety is to hold the conference in a virtual space.

We are pleased to share that the hotels and convention center in Raleigh, North Carolina have been incredible to work with and have agreed to re-contract and move everything to 2023. We are equally pleased the North Carolina Association of Floodplain Managers has agreed to host in 2023 when we expect we will be able to meet in person.

We had great success with our virtual conference in 2020, and with this extra lead time, we are planning an even better experience for our 2021 event. The full virtual program will be posted soon, and registration will open later this month. Stay tuned for more updates, and begin making plans to join us online **May 9-13!** [Visit the conference website.](#)

## Coastal GeoTools 2021 Runs Feb. 8-11

There's still time to secure your place at the Coastal GeoTools 2021 virtual conference. It's the place to be to get the data, tools, and training needed for effective coastal management.

Visit [CoastalGeoTools.org](https://CoastalGeoTools.org) to learn more and register.

# Climate change has caused billions of dollars in flood damages, according to Stanford researchers

By Danielle Torrent Tucker

In a new study, Stanford researchers report that intensifying precipitation contributed one-third of the financial costs of flooding in the United States over the past three decades, totaling almost \$75 billion of the estimated \$199 billion in flood damages from 1988 to 2017.

The [research](#), published Jan. 11 in the journal Proceedings of the National Academy of Sciences, helps to resolve a long-standing debate about the role of climate change in the rising costs of flooding and provides new insight into the financial costs of global warming overall.

"The fact that extreme precipitation has been increasing and will likely increase in the future is well known, but what effect that has had on financial damages has been uncertain," said lead author Frances Davenport, a PhD student in Earth system science at Stanford's School of Earth, Energy & Environmental Sciences (Stanford Earth). "Our analysis allows us to isolate how much of those changes in precipitation translate to changes in the cost of flooding, both now and in the future."

The global insurance company Munich Re calls flooding "[the number-one natural peril in the U.S.](#)" However, although flooding is one of the most common, widespread and costly natural hazards, whether climate change has contributed to the rising financial costs of flooding – and if so, how much – has been a topic of debate, including in the most recent climate change assessments from the U.S. government and the Intergovernmental Panel on Climate Change.

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Flooding has caused hundreds of billions of dollars in damage in the U.S. over the past three decades. Researchers found that 36 percent of the costs of flooding in the U.S. from 1988 to 2017 were a result of intensifying precipitation, consistent with predictions of global warming.

At the crux of that debate is the question of whether the increasing trend in the cost of flooding in the U.S. has been driven primarily by socioeconomic factors like population growth, housing development and increasing property values. Most previous research has focused either on very detailed case studies (for example, of individual disasters or long-term changes in individual states) or on correlations between precipitation and flood damages for the U.S. overall.

In an effort to close this gap, the researchers started with higher resolution climate and socioeconomic data. They then applied advanced methods from economics to quantify the relationship between historical precipitation variations and historical flooding costs, along with methods from statistics and climate science to evaluate the impact of changes in precipitation on total flooding costs. Together, these analyses revealed that climate change has contributed substantially to the growing cost of flooding in the U.S., and that exceeding the levels of global warming agreed upon in the United Nations Paris Agreement is very likely to lead to greater intensification of the kinds of extreme precipitation events that have been most costly and devastating in recent decades.

"Previous studies have analyzed pieces of this puzzle, but this is the first study to combine rigorous economic analysis of the historical relationships between climate and flooding costs with really careful extreme event analyses in both historical observations and global climate models, across the whole

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United States,” said senior author and climate scientist Noah Diffenbaugh, the Kara J Foundation Professor at Stanford Earth.

“By bringing all those pieces together, this framework provides a novel quantification not only of how much historical changes in precipitation have contributed to the costs of flooding, but also how greenhouse gases influence the kinds of precipitation events that cause the most damaging flooding events,” Diffenbaugh added.

The researchers liken isolating the role of changing precipitation to other questions of cause and effect, such as determining how much an increase in minimum wage will affect local employment, or how many wins an individual player contributes to the overall success of a basketball team. In this case, the research team started by developing an economic model based on observed precipitation and monthly reports of flood damage, controlling for other factors that might affect flooding costs like increases in home values. They then calculated the change in extreme precipitation in each state over the study period. Finally, they used the model to calculate what the economic damages would have been if those changes in extreme precipitation had not occurred.

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Even in states where the long-term mean precipitation hasn’t changed, in most cases the wettest events have intensified, increasing the financial damages relative to what would have occurred without the changes in precipitation.

“This counterfactual analysis is similar to computing how many games the Los Angeles Lakers would have won, with and without the addition of LeBron James, holding all other players constant,” said study co-author and economist Marshall Burke, an associate professor of Earth system science.

Applying this framework, the research team found that – when totaled across all the individual states – changes in precipitation accounted for 36 percent of the actual flooding costs that occurred in the U.S. from 1988 to 2017. The effect of changing precipitation was primarily driven by increases in extreme precipitation, which have been responsible for the largest share of flooding costs historically.

“What we find is that, even in states where the long-term mean precipitation hasn’t changed, in most cases the wettest events have intensified, increasing the financial damages relative to what would have occurred without the changes in precipitation,” said Davenport, who received a Stanford Interdisciplinary Graduate Fellowship in 2020.

The researchers emphasize that, by providing a new quantification of the scale of the financial costs of climate change, their findings have implications beyond flooding in the U.S.

“Accurately and comprehensively tallying the past and future costs of climate change is key to making good policy decisions,” said Burke. “This work shows that past climate change has already cost the U.S. economy billions of dollars, just due to flood damages alone.”

The authors envision their approach being applied to different natural hazards, to climate impacts in different sectors of the economy and to other regions of the globe to help understand the costs and benefits of climate adaptation and mitigation actions.

“That these results are as robust and definitive as they are really advances our understanding of the role of historical precipitation changes in the financial costs of flooding,” Diffenbaugh said. “But, more broadly, the framework that we developed provides an objective basis for estimating what it will cost to adapt to continued climate change and the economic value of avoiding higher levels of global warming in the future.”

*“Climate change has caused billions of dollars in flood damages, according to Stanford researchers, by Danielle Torrent Tucker. Stanford University, Jan. 11, 2021. Reprinted by permission of Stanford News.*

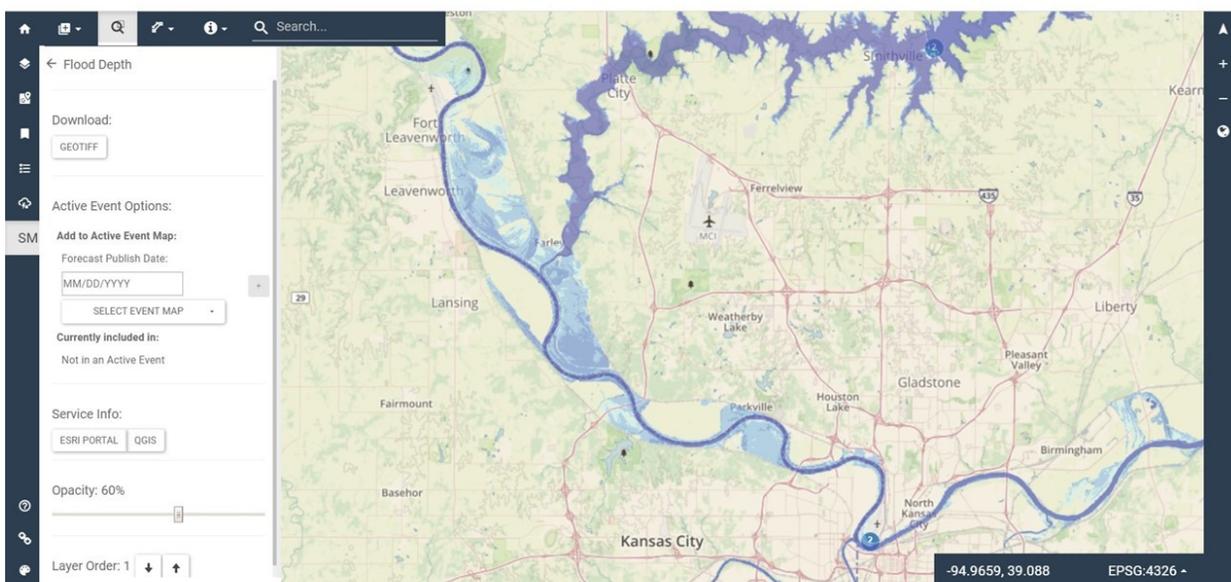
# USACE Inundation Map and Emergency Action Plan Policy Update

By Jason Sheeley

USACE has changed its inundation map policy so that USACE operated and maintained dam and levee emergency action plan (EAP) maps are now releasable to the public. USACE is also updating the National Inventory of Dams (NID) to share USACE EAP maps for dams. This public distribution will help to advance the broad understanding of residual flood risks from USACE dams in the nation and gives the dam safety community a vital information sharing tool that will support incidents and EAP exercises.

The most significant policy change is that inundation maps produced by most USACE programs, including EAP maps, are now releasable to the public. This changes previous USACE policy that EAP maps were restricted and only releasable to emergency management authorities and other federal agencies. It removes the previous requirement for EAP map recipients to sign nondisclosure agreements and to further protect USACE-provided EAP maps as sensitive information.

## **DRAFT - Heavy Viewer for USACE Inundation Maps**



Screenshot of the new inundation map available in the 'heavy' viewer of the publicly available NID. This viewer allows the user to show many different scenarios and additional map layers within a mapping-based system. This heavy viewer is linked to the NID but is a separate web application/viewer from the NID.

USACE is currently updating the NID website to display EAP maps. Maps for USACE operated and maintained dams are scheduled to be visible in the NID by November 2021. Individuals requiring access to USACE dam project EAP maps prior to that time should contact their local USACE District office.

EC 1110-2-6075, titled "Inundation Maps and Emergency Action Plans and Incident Management for Dams and Levee Systems", is [available here](#). Please email any comments to [HQ-EAP@usace.army.mil](mailto:HQ-EAP@usace.army.mil).

*Jason Sheeley is the assistant director of the Modeling, Mapping, and Consequence Center U.S. Army Corps of Engineers.*

Excepted from the [USSD Dams & Levees Bulletin](#), Winter 2020.

# Congratulations to Shannon Hulst, CRS Award for Excellence Winner

Shannon Hulst was recently awarded the 2019 CRS Award for Excellence. The floodplain specialist and Community Rating System coordinator for Barnstable County, Massachusetts helps communities throughout the county implement the CRS and supports them in the NFIP.

In a letter from FIMA, Floodplain Management Division Director Rachel Sears summed up the importance of Hulst's commitment and leadership.

"The CRS Award for Excellence recognizes those who have actively advanced the vision of the NFIP and the CRS and have undertaken efforts to improve the flood safety and resilience in their community—in your case, 15 communities. Your hands-on efforts have made the CRS an accessible and collaborative program. You have gone above and beyond to understand community needs and involve citizens; elected officials; numerous regional, state, and federal agencies; and other stakeholders."



Shannon Hulst

Barnstable County created the CRS and floodplain coordinator position in 2015, in part with seed funding from Woods Hole Sea Grant. Since then, the position has saved Barnstable County home and business owners \$1.8 million and has helped make each of the 15 towns on Cape Cod more prepared to prevent and respond to flooding.

Director of Cape Cod Cooperative Extension Mike Maguire said, "Barnstable County's commitment to innovative and forward-thinking projects like the CRS position has put Cape Cod residents in the enviable position of being ahead of the curve when it comes to floodplain management and mitigation. Shannon's work has been nothing short of exceptional; her commitment to her job, her passion for floodplain management, and her love for the region and our community shine through every day. This award is well-deserved; we are fortunate to have her helping our residents and community with this complicated and increasingly critical issue on Cape Cod."

Woods Hole Sea Grant Director Matt Charette said, "Most importantly, Shannon's tireless work in this area has helped our region become more resilient to flooding from rising seas and more intense coastal storms brought on by climate change."

In 2017, the Barnstable County/Cape Cod Cooperative Extension received the James Lee Witt Local Award for Excellence in Floodplain Management from ASFPM.

## **About the CRS Award for Excellence**

The Community Rating System (CRS) Award for Excellence is presented to individuals actively involved in a CRS community and knowledgeable about local flooding risk. The national award is given to a single recipient annually who has promoted the use of flood insurance as a critical preparation tool, engaged community leaders to continually improve the community's safety and resilience, and promote programs to alert the public to the risk of flooding. Their work has made communities more aware of and resistant to the dangers of flooding and natural disasters across the nation.

Award nominees could be a local government official, insurance agent, business professional, real estate professional, floodplain manager, or other local leader—someone who has provided leadership in raising awareness about flood dangers, implementing floodplain management programs, and promoting the purchase of flood insurance through the CRS and NFIP.

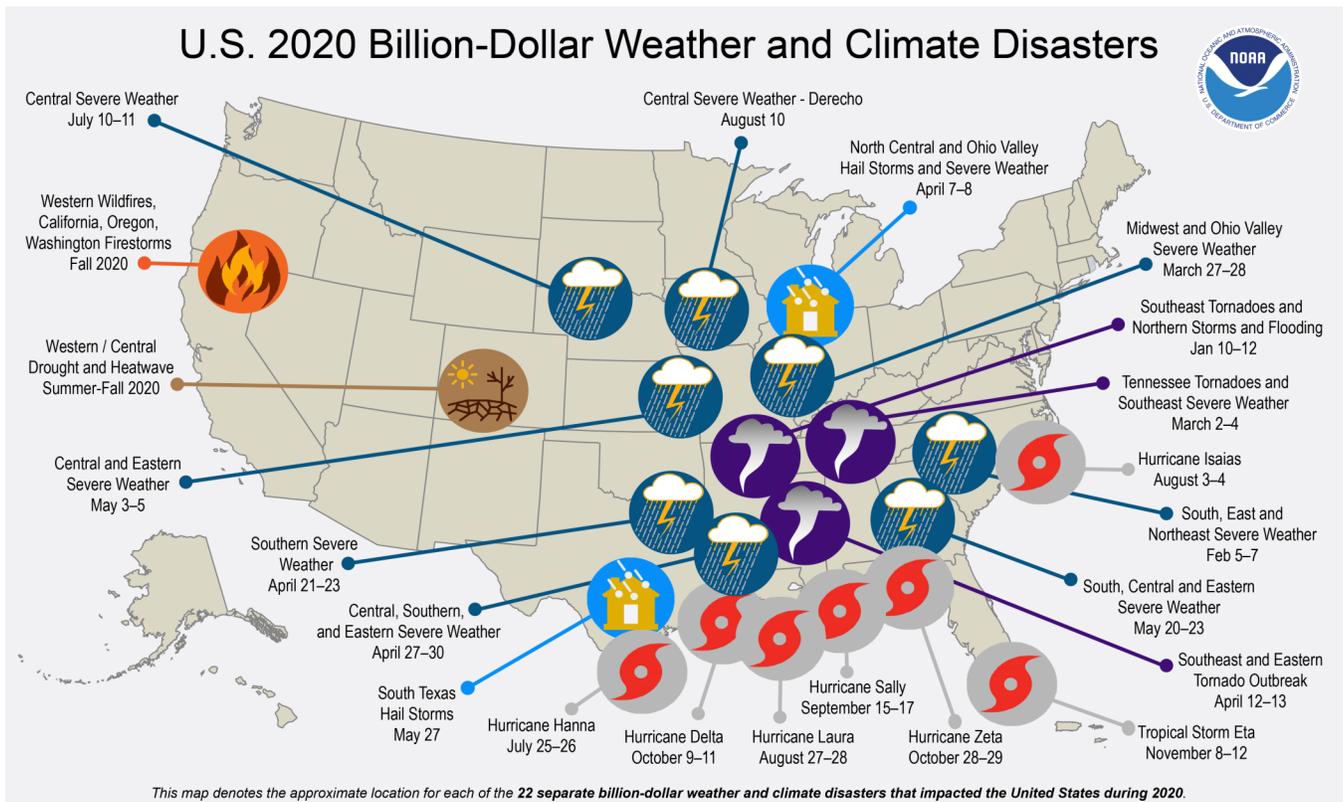
# Record Number of Billion-dollar Disasters

In 2020, there were 22 weather and climate disaster events with losses exceeding \$1 billion each across the United States — shattering the previous annual record of 16 events that occurred in 2011 and 2017. These events included seven tropical cyclone events, 13 severe storm events, one drought, and one wildfire event.

The billion-dollar disasters of 2020 were led by Hurricane Laura, a Category 4 storm that caused \$19 billion in damage and 42 deaths when it slammed the Louisiana coast in August.

“2020 stands head and shoulders above all other years in regard to the number of billion-dollar disasters,” NOAA said.

- Annual losses in 2020 exceeded \$95 billion, the fourth highest cost on record. The most costly events of the year include: Hurricane Laura, the Western wildfires and the Midwest derecho.
- Seven of the 12 tropical systems to make landfall each produced at least \$1 billion in damage, breaking the old record of four separate billion-dollar tropical cyclones in both 2004 and 2005.
- The Central states also experienced a historic severe weather event — the August 10 derecho — that produced damage estimated at \$11.0 billion. The derecho’s damage to infrastructure and crops is the third severe weather event (since 1980) with CPI-adjusted costs over \$10.0 billion, joining the late-April and May 2011 tornado super outbreaks across the Southeastern and Central states.
- The total cost of U.S. billion-dollar disasters over the last five years (2016-2020) exceeds a record \$600 billion.
- 2020 also marks the sixth consecutive year (2015-20) in which 10 or more separate billion-dollar disaster events have impacted the U.S.



# FEMA's Top Five Hazard Mitigation Project Types in 2020

For fiscal year 2020, FEMA obligated more than **\$884 million** in Hazard Mitigation Assistance grants to states, local communities, tribes, and territories for **1,884 projects** that will reduce risk. These top five project types, ranked by dollars obligated, comprise approximately **59 percent** of total dollars obligated, or **\$522 million**.



1. **Acquisitions.** \$150 Million and 209 projects. With funding from FEMA, the community voluntarily acquires properties from homeowners and demolishes or relocates any structures on the property to mitigate flood risk. The land then remains as open space in perpetuity.
2. **Flood Control.** \$115 Million and 171 projects. Flood risk reduction projects such as dikes, levees, floodwalls and erosion projects that are cost-effective, feasible and designed to reduce risk.
3. **Utility and Infrastructure Protection.** \$108 Million and 90 projects. Utility protection and infrastructure retrofit projects are measures to reduce risk to existing public utility systems, roads and bridges. Examples include burying power lines underground to prevent debris or trees downing them during storms or elevating sewer systems to reduce flood risks.
4. **Elevations.** \$79 Million and 78 projects. Elevations are when homes are raised so that potential floodwaters flow underneath the home.
5. **Wind Retrofit.** \$70 million and 66 projects. To minimize damage caused by high winds, wind retrofit enhancements are made to strengthen the roof, walls, doors and windows.

*Excerpted from the FEMA's Mitigation Minute. Jan. 27, 2021. [Learn more about HMA programs.](#)*

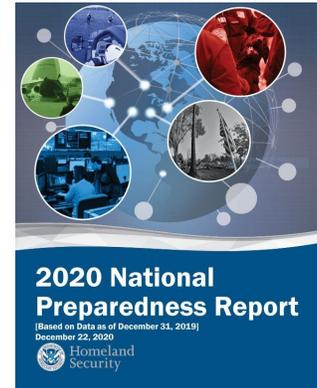


# FEMA NEWS

Updates from the Federal Emergency Management Agency

## FEMA Releases 2020 National Preparedness Report

FEMA released the [2020 National Preparedness Report](#), which presents an updated, risk-focused approach to summarizing the state of national preparedness. As an annual requirement of Presidential Policy Directive 8 and consistent with the Post-Katrina Emergency Management Reform Act reporting responsibilities, the National Preparedness Report (NPR) has assessed the nation's preparedness posture since 2012. This report provides partners across the nation with insights into risks, vulnerabilities, and capabilities to support decisions about program priorities, resource allocations, and community actions.



The 2020 NPR takes an updated, risk-focused approach to summarizing the state of national preparedness in 2019, and therefore doesn't address the impacts of COVID-19 which gripped the nation throughout much of 2020. It presents a discussion of the risks the nation faces and how those risks drive the nation's capability requirements, as well as how the nation uses capabilities to manage risks, including a high-level overview of the nation's current capabilities. Also, the report includes initial results for the National Risk and Capability Assessment (NRCA). The NRCA meets requirements of the Disaster Recovery Reform Act of 2018, which requires "tiered, capability-specific performance objectives" to assess national preparedness. The 2020 report found that although affected communities may not be fully prepared to respond to nationally catastrophic incidents, an analysis of shared national capabilities indicates the nation as a whole is closer to achieving its national goals though some significant capability gaps still remain.

The report also highlights some of the persistent challenges the nation faces, how the nation is working collectively to solve those challenges, and what the nation must continue to do to build on those successes. It also provides a deeper assessment of four identified focus areas: Cascading Impacts, Public-Private Partnerships, Vulnerable Populations, and Housing.

### [FEMA and Cooperating Technical Partners Collaborate for More Resilient Communities](#)

We know that FEMA and Cooperating Technical Partners have been collaborating for many years to make our communities more resilient from flooding. Now the greater public has a chance to read about these collaborations as well. A [recent FEMA blog post](#) touts the successes of the CTP Program and highlights the programs of CTPs who have been recipients in the CTP Recognition Program.

### [Hazard Mitigation Planning and Resilient Communities Story Maps](#)

Hazard mitigation planning supports resilient communities. These success stories illustrate community mitigation planning efforts that exceed FEMA's minimum requirements and support integrated planning that results in fewer losses during disasters. FEMA uses interactive story maps to help explain the Risk MAP (mapping, assessment and planning) process, coastal flood risk, use of FEMA mapping data, mitigation planning, and other programs.

### [NFIP LinkedIn page launched](#)

You can now stay current on NFIP updates with the new NFIP LinkedIn page, which will be used to help advise, advocate, connect, and grow the business of flood insurance. Follow the page to access flood insurance educational information, join conversations on improving the business of flood insurance, strengthen existing industry partnerships, and connect with non-traditional partners such as non-profits serving vulnerable communities. [Follow the page here.](#)





FEMA

# FEMA NEWS

Updates from the Federal Emergency Management Agency

## FEMA Releases Addendum for CRS Manual

FEMA recently released the [Community Rating System 2021 Addendum](#), a companion guide for the current [Coordinator's Manual](#). Together, these documents establish and explain various elements of the Community Rating System program including an official description, how the program operates, and how class ratings (Class 10 to Class 1) are determined.

The documents will remain effective until a fully revised edition of the Coordinator's Manual is issued in the future.

The program provides incentives to encourage local jurisdictions to implement floodplain management best practices that exceed the minimum community-based floodplain management requirements of the National Flood Insurance Program. In return, NFIP flood insurance policy holders can receive reductions in their flood insurance premium.

With the 2021 Addendum, FEMA incorporates three new opportunities for communities to earn credit for a reduction in NFIP policy premiums. These include:

- Protecting threatened and endangered species.
- Mitigating substantial damage.
- Promoting flood insurance.

In addition, new prerequisites allow for both new credit opportunities and simplification for communities. These prerequisites include:

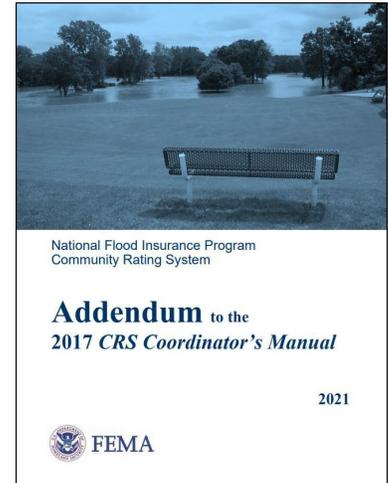
- A plan for managing floodplain-related construction certificates (including elevation certificates) to reach Class 9.
- The implementation of one-foot of freeboard to reach Class 8.

A collection of frequently asked questions about the Addendum are also available at [fema.gov/community-rating-system](https://www.fema.gov/community-rating-system) and recently the [FAQs for the new Class 8 Freeboard Prerequisite](#) have been updated. The updates to the Class 8 Freeboard Prerequisite FAQs are the result of new questions asked by stakeholders regarding manufactured homes, historic homes, machinery and equipment, and attached garages.

For the changes in the Class 9 prerequisite for Elevation Certificates and other construction certificates, a [template](#) for written construction certificate management procedures is available. The template will help a community produce a document that describes the manner in which its office collects, reviews, corrects, and maintains the certificates, and how they are made available to the public.

Guidance materials for new credit opportunities will be available in the coming weeks. They will include information on how to develop floodplain species assessments and floodplain species plans for natural functions plan credit under Activity 510 (Floodplain Management Planning), and how to develop a plan for the management of substantial damage.

The [CRS Webinar Series](#) and recordings of CRS webinars will continue to focus on the 2021 Addendum. For more information, view the 2021 Addendum on the [FEMA website](#).





FEMA

# FEMA NEWS

Updates from the Federal Emergency Management Agency

## 2021 National Flood Insurance Program Traditional Reinsure Placement

FEMA has completed its 2021 placement of reinsurance to continue the National Flood Insurance Program's (NFIP) support of resiliency and protection against flood losses.

The agency transferred \$1.153 billion of the NFIP's financial risk to the private reinsurance market throughout 2021.

For this placement, 32 reinsurer companies agreed to indemnify FEMA for flood losses from individual flood events or a named storm. FEMA paid a total premium of \$195.8 million for the coverage. The agreement is structured to cover:

- 9.43% of losses between \$4 billion and \$6 billion.
- 28.084% of losses between \$6 billion and \$8 billion.
- 20.168% of losses between \$8 billion and \$10 billion.

To date, FEMA has transferred \$5.155 billion of the NFIP's flood risk to the private sector. This yearly traditional reinsurance placement is in addition to the multi-year capital markets reinsurance placements for \$1.2 billion which occurred in 2018-20.

FEMA would receive qualifying payments only if a named storm event is large enough to trigger both traditional and capital market reinsurance placements. Should a named storm event result in flood insurance claims exceeding \$10 billion, FEMA would receive the full \$2.353 billion of reinsurance coverage from the private markets.

For more information, visit the [NFIP Reinsurance Program webpage](#) on FEMA.gov.



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## FEMA Approves \$3.7B to Rebuild PRASA Facilities in Puerto Rico

FEMA recovery operations in Puerto Rico continue with the recent announcement of more than \$3.7 billion obligated to the Puerto Rico Aqueduct and Sewer Authority to repair and rebuild over 3,000 facilities. Besides water treatment plants and thousands of linear feet of sewer and water lines, the island's main water testing lab will also be rebuilt with a portion of the funds. Likewise, seven facility-owned dams and four reservoirs will be repaired, including drainage systems and sediment removal.

This is the third multibillion-dollar project this year for Hurricane María recovery efforts. In September 2020, \$9.5 billion and \$2.06 billion were awarded to rebuild the island's power grid and public schools, respectively. This brings total obligations for Puerto Rico under the Public Assistance program to over \$23 billion. [More on the recovery efforts in Puerto Rico.](#)

# NEWS BRIEFS

## News and resources for the floodplain management community

### [Biden Reinstates Obama-Era Federal Flood Protection Standard](#)

Now that the standard is reinstated, federal agencies must use more protective siting and design requirements for infrastructure projects that receive federal funding, such as affordable housing, emergency response facilities, and water and wastewater systems.

### [Millions Left on the Table: How Cities Can Do More To Battle Rising Flood Insurance Rates](#)

The Community Rating System, or CRS, has been around since 1990 and is meant to incentivize localities to reduce their flood risk. It's increasingly important as climate change fuels more frequent and severe flooding and rising sea levels, leading flood insurance premiums to rise. But experts say many communities aren't taking full advantage, and it's costing people.

### [Rural Resilience: Disaster Preparedness for Communities Off the Beaten Path](#)

For rural communities, building resilience is difficult for a number of reasons. Smaller tax bases can cause financial constraints, limited population can affect the way state and local mitigation and recovery funds are distributed, and training opportunities and equipment for disaster response might also be lacking. Reduced access to technology can prevent communication before, during, and after disasters.

### [Sea-Level Rise is 'the Hidden Threat' as Residents Purchase Waterfront Homes](#)

Maryland sellers are only required to specify whether their property is located in a FEMA flood zone, conservation area, wetland, or Chesapeake Bay critical area. They don't have to disclose whether there have been any flood damages to structures on the property or whether the home requires flood insurance.

### [Pew-Led Network Helps States Plan for Rising Costs and Impacts of Flooding](#)

The State Resilience Planning Group (SRPG) is a forum developed by Pew Charitable Trusts for states to collaborate on innovative practices and lessons learned as they develop and implement comprehensive resilience plans.

### [4 Ways to Reduce Disproportionate Flood Risk and Build Resilience for all Communities](#)

America's flood risk gap is the result of centuries of systemic inequities, environmental racism and policies that have prioritized wealthy communities at the expense of communities with the highest flood risk and also greatest need for resources. Closing this gap will take time, but it must be a priority for policymakers at all levels going forward to achieving equity and building resilience for all communities.

### ['We Don't Sleep When It's Raining': the Mental Health Impact of Flooding](#)

Researchers who examined studies on flooding events in the UK from 1968 to 2016 found people affected by flooding are nine times more likely to experience long-term mental health issues and continue to experience anxiety during heavy rain even years after being flooded.

### [3 Ways the Biden Administration and Congress Can Lower America's Flood Risk—and Costs](#)

Together, these steps would lower the costs of flooding and improve the lives of millions of Americans by making communities more aware of risk, equipping states to be more proactive in mitigation, and ensuring that infrastructure is more flood ready.

### [Integrating Asset Management and the Community Rating System](#)

Over the past decade, much has been written about infrastructure asset management and its various benefits. However, one topic that hasn't received much attention is how asset management can strengthen a city's CRS program. A well-designed asset management system provides a large dataset that can be mined for CRS credit.

*(Continued on page 19)*

# NEWS BRIEFS

## News and resources for the floodplain management community

*(Continued from page 18)*

### [Site Management Feature: Floodplain Models And Facilities](#)

As the likelihood of extreme weather events grow more frequent, existing floodplain models and regulatory base flood elevations should be confirmed and run with updated rainfall intensities to ensure proper safeguards are in place to protect facilities now and into the future.

### [Severe Weather 101 - Flood Basics for Public Outreach](#)

The National Severe Storms Laboratory, in collaboration with NOAA, created learning resources to teach the public about the risks of extreme weather, such as thunderstorms, tornadoes, and floods. These resources cover flood basics, risk detection, forecasting, and answers frequently asked questions.

### ['The Science is Real': Coastal Experts Hope Biden Will Partner to Combat Sea Level Rise](#)

"We're eagerly looking forward to change and action that will assist states in preparing themselves and their residents," said Ann Phillips, a retired Navy rear admiral who serves as special assistant to Virginia's governor for coastal adaptation and protection. "It all starts with acknowledging climate change is happening and the science is real."

## STATE NEWS

### FLORIDA

#### [Miami Beach's Housing Crisis Worsened By Climate Change](#)

A little over four feet of elevation is all that's standing between some waterfront neighborhoods winding through Miami Beach and the unrelenting force of the Atlantic Ocean. At Eighth and Washington, where Gregario Lopez, 81, lives in a Section 8 apartment, it's even less. Lopez has been without regular income since 2010, when a bad fall left him injured and unable to work.

#### [State Announces \\$20M in Awards to Assist Communities in Developing Plans to Enhance Resiliency](#)

Nearly \$20 million has been awarded to 37 Florida counties, municipalities, educational institutions, and non-profit organizations to bolster their community's resiliency to future disasters. See the full list of recipients and how they'll be using the funds.

### MICHIGAN

#### [New bill to address shoreline erosion on Great Lakes communities signed into law](#)

The new law in Michigan provides support for local communities facing rising water levels, coastal erosion, and flooding that have put homes, property, and communities at risk, and caused millions of dollars in damages.

### SOUTH CAROLINA

#### [Charleston Gives First Greenlight to Army Corps of Engineers' Wall Plan](#)

Charleston will move forward with an Army Corps of Engineers plan to repel hurricane surge, including a wall around most of the downtown peninsula. It is an ambitious and expensive plan to protect the historic, low-lying city from flooding. Early cost estimates are around \$1.75 billion.

### VIRGINIA

#### [City Closes on \\$12M Environmental Impact Bond to Curb Flooding, Stormwater Runoff](#)

Three projects that will give Hampton the ability to capture, store, redirect and filtrate some 8 million gallons of stormwater that otherwise would flood city neighborhoods are now funded.



# Member News



Dewberry, a privately held professional services firm, has announced the promotion of nearly 50 employees nationwide, including 15 in the firm's headquarters in Fairfax, Virginia. We're giving a special shout-out to the four ASFPM members:

- **Jean Huang, PE, CFM, ENV SP** was promoted to vice president. Huang is the program management director for the resilience solutions group. Huang is a member of ASFPM, New York State Floodplain and Stormwater Managers Association, and the Project Management Institute (PMI).
- **Stephen Kalaf, PMP, CFM** was promoted to vice president. Kalaf is the executive director of quality assurance and is a senior project manager in the resilience solutions group. He is a member of ASFPM, American Society for Quality, and PMI.
- **Siamak Esfandiary, Ph.D., PE**, was promoted to associate vice president. Esfandiary is a program manager in the resilience solutions group and a member of ASFPM, American Water Resources Association, and Society of Risk Analysis.
- **Seng Chan, CFM** was promoted to associate. Chan is senior client relations manager in the resilience solutions group. She is a member of the Virginia Floodplain Management Association and ASFPM.

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## Welcome New Members!

Kate D. Williams, AC Disaster Consulting  
Cameron Morris, AC Disaster Consulting  
Jaimie E. Portelle, AC Disaster Consulting  
Rachael E. Cooper, P.E., CFM, Univ. of S. Florida  
Tom Sexton, MRP, Rails-To-Trails Conservancy  
Joel T. Cook, Town of Nolensville, TN  
William R. Patterson  
Charles H. Ross, National Weather Service  
Kelly D. Woodward, AICP, Jefferson Cnty., KS  
Timothy A. Gibson City of Fort Walton Beach, FL  
Joseph Myles Gardner, P.E., Kirkham Michael & Assoc.  
Darius Pokoj  
Amber Hobbs, Cascade Cnty., MT  
Charity N. Yonker, Cascade Cnty., MT  
Kevin E. Nurre, Cascade Cnty., MT  
Alison Bowen  
Jonathan Roe, ANFI, Torrent Technologies, Inc.  
Brennen E. Fischer, CFM, Ruekert & Mielke, Inc.  
Tyler Phelps, P.E., Coldwater Engineering  
Ajani Stewart, Arcadis U.S., Inc.

Kimberly L. Wilson, Escambia Cnty., FL  
Caleb G. MacCartee, Escambia Cnty., FL  
Eugene Allen Hampton, II, Escambia Cnty., FL  
Connor T. Johnson, AECOM  
Laura Tessier, Woodard & Curran  
Brennan B. Beam, P.E., CFM, USACE  
Kristin Smith, Headwaters Economics  
Doris Otero, APTIM  
Kelly D. Simpson, E.P.C.I.  
I'Reka Jordan, FL Div. of Emergency Mgmt.  
Cary Helmuth, FL Div. of Emergency Mgmt.  
Rod Pakzadian, FL Div. of Emergency Mgmt.  
Kristen Hall, FL Div. of Emergency Mgmt.  
Amanda Chin, FL Div. of Emergency Mgmt.  
Gena K. Johnson, P.E., Lotus Engineering & Environmental  
Melanie M. Perello, Minnesota's Lake Superior Coastal Program, MNDNR  
Jason M. Evans, Ph.D., Stetson Univ. Institute for Water & Environment

# Last Chance for ASFPM Award Nominations

Do you work with someone who is advancing the association's mission and keeping communities safe from flood loss? Nominate them today for an ASFPM Award!

These annual awards serve to recognize the outstanding contributions made by individuals, agencies, and organizations to keep communities safe from flood loss, promote resiliency, and advance the association's mission.

[Go here](#) submit your nomination. **The deadline is Feb. 10, 2021.**

Learn more about the categories below. To see the list of past winners, [visit the ASFPM website](#).

## AWARD CATEGORIES

**Tom Lee State Award for Excellence** is given annually to recognize an outstanding floodplain management program or activity at the state level (not an individual)

**James Lee Witt Local Award for Excellence** recognizes outstanding local programs or activities at the front lines of floodplain management. Eligible entries include local units of government such as cities, towns and counties (not an individual).

**Larry R. Johnston Local Floodplain Manager of the Year Award** honors outstanding individual efforts and contributions at the local level. It recognizes an individual responsible for the development of a distinguished local program or activity, or one who struggles to implement flood hazard reduction at the local level in the absence of sophisticated programs and support.

**John R. Sheaffer Award for Excellence in Flood Proofing** is presented for completed work involving a particular project, work, research, design or publication that exhibits the incorporation of accepted procedures, practices and constraints of flood proofing, or promotes the field or knowledge of flood proofing by enhancing the awareness and use of new procedures, methods, designs and/or products. Individuals, private organizations or governmental units and agencies are eligible.

**Outreach/Media Award** acknowledges efforts of media to increase information and/or awareness of flood issues with the general public. It is also for an individual, agency or organization for exceptional outreach efforts.

**John Ivey Award for Superior Efforts in Certification** recognizes exceptional efforts to promote the professional certification of floodplain managers.

**Meritorious Lifetime Achievement in Floodplain Management Award** recognizes individuals who, throughout their career, have achieved success in a significant aspect of floodplain management. These efforts include policy, outreach, implementation, education, government, research, litigation or other actions that demonstrate the advancement of flood loss and risk reduction within the nominee's professional realm.

**Outstanding Chapter Award** recognizes an ASFPM chapter for exemplary practices and activities that deserve national recognition. It acknowledges distinguished works by a chapter in going above and beyond its mission in a way that can be shared and replicated by other ASFPM chapters.

**Goddard-White Award** is given to individuals who have had a national impact carrying forward the goals and objectives of floodplain management.

**Jerry Louthain Distinguished Service Award** is the highest award ASFPM gives to recognize individuals who, through their long-term efforts, have clearly influenced the work of the association.

## ASFPM Editorial Guidelines

ASFPM accepts and welcomes articles from our members and partners. “The Insider” and “News & Views” have a style format, and if necessary, we reserve the right to edit submitted articles for space, grammar, punctuation, spelling, potential libel and clarity. If we make substantive changes, we will email the article back to you for your approval before using. We encourage you to include artwork with your article in the form of photos, illustrations, charts, and graphs. Please include a description of the art, along with the full name of who created the art. If the art is not yours originally, you must include expressed, written consent granting ASFPM permission to use the art in our publications.

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