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## Pending Loss of Community Rating System Flood Insurance Discounts

SPENCER ROGERS, NC SEA GRANT – UNC-W CENTER FOR MARINE SCIENCE

A decade ago, a number of coastal communities in the state lost Community Rating System (CRS) discounts applied to every **flood insurance** policy in the community. This loss was due to a link between CRS and the Building Code Efficiency Grading System (BCEGS). North Carolina's wind-borne debris standard resulted in lowered BCEGS ratings, and those ratings in turn capped the CRS rating. About half the beachfront communities affected at that time re-gained the lost discounts when the state's wind-borne debris zone was expanded to cover the barrier islands. Most mainland coastal communities remain capped.

A similar problem is now pending state-wide. Because more coastal communities have higher CRS ratings, they will be the most likely to be affected. The BCEGS rating system includes several severe grading losses that drastically lower BCEGS ratings. Wind-borne debris is a just one example. A similar pending drop in ratings is caused by the age of the national building code on which the North Carolina Building Codes are based. BCEGS severely downgrades building codes based on versions of the International Building Code & International Residential Code (I-Codes) that are more than six years old.

BCEGS determines the age of the code by comparing the reference code cover date to the calendar year at the time of the community review. The present 2012 NC Building Codes now in effect are based on the 2009 I-Codes, and thus are eight years old. State law now requires that the NC codes be updated no more frequently than every six years. Updated 2018 NC Codes have been drafted and are scheduled to take effect on January 1, 2019, based on the 2015 I-Codes — and therefore will be four years old already when implemented.

The latest CRS manual places a cap at a 15% flood insurance credit (Class 7) on communities with BCEGS scores poorer than 5 (of 10). Fifteen NC communities now receive a CRS credit of 20% or higher that may drop to 15% in the next BCEGS and CRS reviews are completed thru 2018. (See Exhibit A on page 16.)



## From the Chairman's Desk



DAVID KEY, PE, CFM  
NCAFPM CHAIRMAN

Greetings, North Carolina Floodplain Managers! I hope everyone has had a wonderful fall and is getting geared up for the holiday season. What a difference a year makes in North Carolina with respect to flooding. One year ago last fall, the eastern half of our state was still in the early stages of recovering from Hurricane Matthews' devastating flooding. What a year of recovery it has been! It has also been a very active and productive year for our Chapter.

Throughout the spring, North Carolina Emergency Management (NCEM) was busy completing Resilient Redevelopment Action Plans for fifty counties. These plans included conducting meetings with community leaders to identify the most impacted areas. Hundreds of flood mitigation actions were developed addressing the following key recovery pillars: housing, economic development, environmental, and infrastructure needs. The fifty plans are now complete and can be reviewed and downloaded at: [rebuild.nc.gov/resiliency/hurricane-matthew-resilient-redevelopment-plans](http://rebuild.nc.gov/resiliency/hurricane-matthew-resilient-redevelopment-plans).

In late October, over 150 of us gathered in beautiful uptown Charlotte for our Fall Floodplain Institute. This year, we set another record for conference attendees, and the conference included great presentations by Charlotte Mayor Jennifer Roberts, Dave Cannan, Tim Trautman, John Dorman, Tim Rogers, WCNC meteorologist John Wendel, and many others. See page 7 for more information about the fall 2017 conference. And please be sure to mark your calendar for our annual spring conference. We are again going somewhere new for our conference venue. We will be at the Hilton Wilmington Riverside in downtown Wilmington – a town where we have not had our spring conference. (*Side note: We have a list of past conferences locations on our website – click the Conferences tab on our menu bar.*) I personally made a “field trip” to the site a few weekends ago and I guarantee you all will love the location!

In late November, the State of North Carolina also began the housing recovery process using the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) funding for housing assistance. Housing Assistance Application centers opened on November 30 in four of the most impacted counties (Cumberland, Edgecombe, Robeson and Wayne). Citizens can make an appointment at these centers to begin the process of HUD Housing Assistance.

There is a lot going on in our industry and in our state, some of which will be covered in this edition of *FlashFlood News*. I sincerely hope ya'll are have a wonderful holiday season and I thank you for your dedication to protecting property and lives in this state. I'm looking forward to seeing you all in Wilmington! ▲

A handwritten signature in blue ink that reads "David".

# In Memoriam: Philip Stark Letsinger

JULY 21, 1939 - OCTOBER 24, 2017

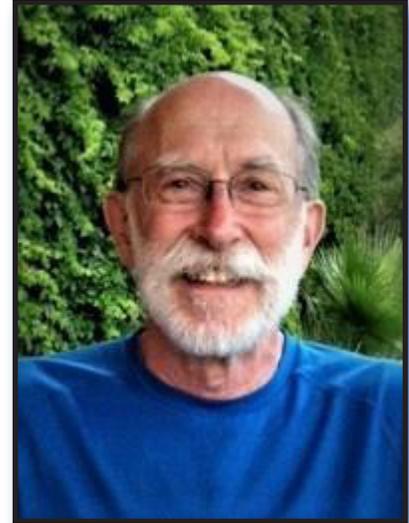
Philip Stark Letsinger, 78, of Raleigh, NC, died on October 24, 2017. Phil lived a full life of purpose, service, and civic virtue, leaving an indelible mark on the community fabric of Raleigh, his adopted hometown.

Phil wanted to be an architect from an early age. He obtained a bachelor's degree in architecture from Miami (Ohio) University in 1962 and a master's degree in city planning from the University of Pennsylvania in 1964. His graduate studies were supported by an American Institute of Architects scholarship and a Sears Roebuck Foundation fellowship.

After graduation, Phil served as an architect in the Peace Corps, working in Brazil from 1964 to 1966 and maintaining his involvement throughout his life. Settling in Raleigh in 1966, Phil soon became an integral member of his local community including his church and civic organizations.

As a professional architect and city planner, Phil was self-employed during the 1970s and 1980s, assisting communities with planning and historical architectural surveys. He also worked as a facilities project manager for Duke University. He worked with communities on disaster recovery, which guided him into the next part of his career. From 1994 until his retirement in 2007, Phil worked in Emergency Management for the State of North Carolina.

We hope that you take the time to read Phil's full obituary online at [Legacy.com](http://Legacy.com) as there is so much more to Phil that we couldn't fit in this article.



## Tributes to Phil Letsinger from NCAFP Board Members

"I've known Phil for about 16 years and attended several of his training sessions in my early days of floodplain management. Phil was a personable and kind person, always willing to help and to listen. He was very disciplined, loved his wife, and was passionate about life. He appreciated NCAFP and continued to attend conferences well past his retirement. At our last Annual Conference in Atlantic Beach, Phil not only showed up but also donated a silent auction item: "The Great Wave Socks." A pair of socks with logo, "Wear The Wave," which displayed the graphic design for FEMA's floodplain management manuals. Thank you, Phil, for your friendship, help, example, work, and life." — **John Fullerton**

"I had the pleasure of knowing and working with Phil since he joined the state's NFIP program. He was an ardent supporter of NCAFP and floodplain management in our state, serving as the state NFIP coordinator for several years prior to his retirement. His planning background and experience gave him the special ability to relate to and promote sound floodplain management to local officials, many in the planning profession as well." — **Bill Tingle**

"I remember Phil's easy smile and willingness to strike up a conversation. He seemed to enjoy being a part of our Association and teaching new floodplain managers. I had a conversation once with Phil about his activism. I remember that he was passionate about smart development and protecting neighborhood character. I also remember that he traveled with his church on mission trips. He seemed to love his chosen career, but I think he was fulfilled by making loving contributions in several areas. — **Cynthia Fox-Clark**

"I worked with Phil for nearly 20 years in this industry. His dedication to sound floodplain management and education will be missed in our State." — **David Key**

## Education & Outreach: STEMs and Tides

DAN TOMCZAK, CFM | EDUCATION AND OUTREACH COMMITTEE CHAIR

*Laura Arnold, Melonee Brock, and David Goode teamed with Charlotte Mecklenburg Storm Water Services to discuss with students about the impacts from flooding at the Catawba River STEM Learning Fair in Huntersville.*

### STEM Fairs

NCAAFPM members Laura Arnold, Melonee Brock, and David Goode volunteered at the 7th Annual Catawba River STEM Learning Fair at the Duke Energy Explorium in Huntersville in September. The event drew over 500 fifth graders from Mecklenburg and Gaston counties. NCAAFPM worked jointly with staff from Charlotte-Mecklenburg Storm Water Services to demonstrate the WARD flood model. In addition, Laura Arnold and Dan Tomczak assisted at the STEM Opportunity Fair for Students with Disabilities at the NC Museum of Natural Sciences in Raleigh in November.

Students at both events loved the hands-on opportunity to design a community and subject it to rainfall and flooding events. The model allows multiple scenarios to be discussed and tested. The students learned about designing/building safer communities, planning and mitigation activities, the hydrological cycle, hurricane history, and hydraulic design. Although the events were informative for the students, the events were also topical and relevant as many of the

students had experienced some extent of flooding and were excited to share their stories. Overall, the STEM Learning Fair in Huntersville and the Opportunity Fair in Raleigh were great events that provided the chance to share our passion for protecting lives and property with young stakeholders.

### North Carolina King Tides Project

The North Carolina King Tides (NCKT) Project ([nckingtides.web.unc.edu](http://nckingtides.web.unc.edu)) continues to gain momentum through additional grant funding from North Carolina Sea Grant (NCSG) and Carolinas Integrated Sciences and Assessment (CISA), enabling the project to expand into water-level monitoring. Set up by the University of North Carolina Institute of Marine Sciences, the project was developed to have citizen scientists photograph areas of high water/flooding during tidal events (King Tides) so that potential future sea level rise issues can be better visualized and planning decisions can be implemented. With the funding from the recent grant, the project is now expanding by setting up permanent gauging stations for water level monitoring at select locations along the coast with the goal to have at least one gauging station in each of the 20 NC Coastal Area Management Act counties. Water level gauging stations have already been established at sites in Jacksonville, Pine Knoll Shores, and Morehead City and citizen scientists have already started collecting



*Water level gauging station (lower left in photo) for the NC King Tide Project set-up at the Big Rock Landing in Morehead City.*



water level data at the stations.

Photographs and water level information can be uploaded into the *What's Your Water Level* app hosted by the National Oceanic and Atmospheric Administration (through the NCKT project's website). Areas of high water were observed by the Town of Wrightsville Beach (Danielle Villegas) in November 2017 and the Town of Carolina Beach (Jeremy Hardison) in December 2017. The next King Tide high water event along the coast is scheduled to occur during January 1-4, 2018. If you live near the coast and are interested in becoming a citizen scientist to assist with the NC King Tide project, contact me at [daniel.tomczak@ch2m.com](mailto:daniel.tomczak@ch2m.com). UNC-IMS is also interested in setting up informational meetings to discuss the NCKT project and how to become more involved as citizen scientists.

### Get Involved!

There are many other outreach opportunities for members to become more involved with NCAFPM, including the "Turn Around Don't Drown" campaign, the High Water Mark Initiative, Forsyth Creek Week, and Durham Creek Week. If you are interested in becoming involved in outreach for NCAFPM or potentially using the Ward's flood model for an upcoming activity or event, please feel free to contact me at [daniel.tomczak@ch2m.com](mailto:daniel.tomczak@ch2m.com). ▲



Laura Arnold and Dan Tomczak work with students on the WARD's flood model at the STEM Opportunity Fair in Raleigh.

## BORED? Why Not Be On (the) Board?

JOHN W. FULLERTON | NCAFPM AT-LARGE BOARD MEMBER

A session at the recent FFI in Charlotte sought to gain interest from members in exploring the benefits of serving on the NCAFPM board. Past and present board members offered some thoughts and shared their experiences about the benefits of board membership. Past chair Cynthia Fox-Clark, was unable to attend the session but has volunteered her experience(s) in a succinct and meaningful manner. Cynthia's are the italicized words.

*Benefits of volunteering on a board in terms of overall health:* It is a fact that service of any kind can contribute to ones own mental and physical health. Thinking about and working for others often gets us out of our own head which allows us a new perspective not only on others issues but often on our own.

*Benefits of contributing and feeling invested in a good cause:* Floodplain management has at its core the protection of life and property. The sense of belonging and contributing to this noble cause can be a reward in itself.

*Feeling like a group depends on you to help make progress and cause change:* Conferences, workshops, newsletters, and networking opportunities supply a means to stay up to date and set new benchmarks for floodplain management. New technologies and the ability to quickly share information allow us to share and shape the critical facets of floodplain management. Board members play a lead role in the planning and implementation of these events and communications.

*Being on the board allowed me to be exposed to various professionals, with varied interests, from across the state.* North Carolina is recognized nationally as being on the cutting edge of floodplain and hazard management. The opportunity for close interaction with industry leaders from across the State as well as others from across the country provides our board and members with an asset not readily available in most other areas.

*Problems or questions became smaller and easier answered when shared with fellow board members.* For over 25 years the NCAFPM has shown itself to be a cohesive, responsible, and productive organization which tries to keep the needs of the membership at the forefront of its mission.

*Friendships you are able to cultivate and enjoy through my involvement.* An excellent opportunity for strong and lasting friendships! ▲

**From the hotel:** "Situated ideally in North Carolina's oldest historic district, **Hilton Wilmington Riverside** is close to the most popular Wilmington attractions: Bellamy Mansion (0.6 miles), Burgwin-Wright House (0.2 miles), Cape Fear Museum of History & Science (0.7 miles), Carolina Beach (15 miles), Children's Museum (0.3 miles), Ghost Walks (various), Hollywood Location Tours (various), Latimer House Museum (0.4 miles), USS North Carolina Battleship (2.4 miles), Wilmington Railroad Museum (0.3 miles), Wilmington's Riverwalk (0.0 miles), and Wrightsville Beach (12 miles).

You'll discover just as much to love on-site at the Hilton Wilmington Riverside hotel. To stand apart from other hotels in Wilmington, NC, we provide an upscale, full service experience with a focus on affordability. Each of the 272 stylish rooms of our downtown Wilmington lodging has been recently redesigned to maximize guest comfort and provide a calm, tranquil complement to Wilmington's lowkey attitude. Contemporary accents like deep mahogany furnishings and goose-down duvet comforters finish the space nicely while complimentary high-speed Internet access and ergonomically designed work facilities serve the high-tech needs of the modern traveler."

## NCAFPM 2018 Annual Conference

*Mark your calendar!*  
**2018 Annual Conference**  
**Wilmington, NC**  
**April 15-18, 2018**

Downtown Wilmington marks the location of NCAFPM's 27<sup>th</sup> Annual Conference. Located along Wilmington's Riverwalk, the Hilton Wilmington Riverside (described below and in left column) offers a vibrant venue for best attended conference of the year. A diverse and multi-faceted program is planned in hopes

of supplying interesting for neophytes and veterans in the floodplain management field.

From the hotel: "Lose yourself to the history, hospitality and immaculate charm of Wilmington and stay at one of the top Wilmington hotels while you do it. At the Hilton Wilmington Riverside hotel, we pride ourselves on hassle-free lodging located on the Cape Fear Riverfront in the heart of this historic city. Surrounded by antebellum mansions, brick laden streets and the inviting personality of an era long past, no other hotel in Wilmington offers a more unforgettable stay. We are conveniently located 2 hours from Raleigh, NC and 4 hours from Charlotte, NC."

Registration for the NCAFPM Annual Conference will open in February 2018. NCAFPM members will receive an email when registration opens. Hope to see you there! ▲



# 2017 NCAFFPM Fall Floodplain Institute REPORT

JOHN FULLERTON, CFM  
NCAFFPM AT-LARGE REP.

## RACING TO RESILIENCY

2017 Fall Floodplain Institute

October 24-27, 2017

Fairfield Inn & Suites Marriott – Charlotte Uptown



*City of Charlotte Mayor Jennifer Roberts opened the conference by welcoming the Fall Floodplain Institute attendees to Charlotte, NC.*

NCAFFPM came to Charlotte, NC, for the first time for our Fall Floodplain Institute (the last time a NCAFFPM conference was in Charlotte was the 2001 ASFPM National Conference and the 1995 Annual Spring Conference). Our 2017 Fall Floodplain Institute — Racing to Resiliency — was held October 24-27 at the Fairfield Inn & Suites Marriott - Charlotte Uptown.



### Conference Highlights

Over 30 presentations were combined with networking opportunities as well as social time. Fourteen corporate sponsors assured the financial success of the conference including general sponsors **AECOM, Atkins, Dewberry, ESP Associates, McAdams, Smart Vent, and Surdex Corporation**. Break sponsors included **AECOM, Freese and Nichols, Quantum Spatial, and THC, Inc.** Program Chair **David Goode** organized a varied and instructional program which included presentations in a variety of areas led by government staff, academics, and consultants. We also

*— continued on next page*



## 2017 Fall Floodplain Institute Recap (from previous page)

offered a CFM exam refresher session. Nine new potential NC CFMs (and one national) took the exam Friday morning.



*NCAFPM conferences are definitely not “all work and no play”! In addition to our annual golf tournament, we also had a cornhole tournament this year.*

Approximately 150 people (one of our highest attended fall conferences) attended the conference this year.

### Presentations Available Soon

The presentations from our speakers are currently being compiled. We will send an email to our membership when the presentations are ready to share.

### Continuing Education Certificates

Credit certificates have been emailed to all attendees who signed the CEC sign-in sheets. If you have not received your certificate or you have questions about the credits assigned on your certificate, please contact Kelly Keesling at [ncafpm@ncafpm.org](mailto:ncafpm@ncafpm.org).

We appreciate all of our presenters, moderators, and sponsors including a special thanks to all attendees who made the 2017 Fall Floodplain Institute a success! ▲



*NCAFPM Chair David Key takes a selfie with long-time member Lloyd Tyndall.*

## 2018 Fall Floodplain Institute (FFI) Returns to Asheville

The newly renovated Crowne Plaza Asheville will be the site for our fall conference (FFI) on October 16-19, 2018. The Crown Plaza hosted our 2<sup>nd</sup> and 4<sup>th</sup> Fall Floodplain Institute in 2007 and 2009 respectively. Located one mile from downtown Asheville, the resort offers tennis, golf, and a fitness center along with restaurant and lounge facilities. The beauty of the fall colors surround this venue and provides a spectacular backdrop for our conference.

The NCAFPM Fall Floodplain Institutes have been averaging about 150 attendees with a program designed to offer required CEU's for engineers and floodplain managers. In addition, the conference attempts to be relevant for all levels of experience in floodplain management and provide valuable networking time for attendees.

**Save the dates on your calendar — October 16-19, 2018 — and plan on attending!**

# A Tribute to Susan Frady

NCAFPM Treasurer and Board Member Since 2008

## What Does Susan Frady Do in Her “Spare Time”?

As the first day of this year’s Fall Floodplain Institute came to a close, NCAFPM Treasurer and conference check-in manager Susan Frady closed the registration table and very quietly and inconspicuously slipped out of our host hotel and drove off with husband, Dennis, to go to a “meeting [she had] to attend.” That meeting turned out to be the Land of Sky’s Annual Banquet and Awards Ceremony where Susan was presented with a plaque recognizing her service to Hendersonville and the region. Thank you Susan, for your service and time, and congratulations on this prestigious award!



Susan’s plaque reads:

Presented to  
**Susan Frady**

For her dedication in serving the citizens of the City of Hendersonville and the Land of Sky region since 1987. Her service has greatly enhanced the quality of life for countless citizens. Ms. Frady is a dedicated and faithful public servant. Her leadership and work ethic serves as a shining example for all that choose to serve the public.

Presented this 25<sup>th</sup> day of October, 2017  
by Land of Sky Regional Council

### About the Award

The Robert E. Shepherd Excellence in Local Government Award was dedicated in 2016 and is presented at the Council’s discretion to annually honor a local government professional who has shown great leadership in improving governance and service delivery, especially in the areas of regional cooperation and collaboration. The award, in the form of a plaque, is given to someone for exceptionally positive impacts on the delivery of public services. The award is named after Land of Sky Regional Council’s first executive director of 30 years.

### About Land Of Sky

Land of Sky Regional Council is a multi-county, local government planning and development organization. It reaches across county and municipal borders providing technical assistance to local governments and administer projects and programs which benefit our region’s citizens. Land of Sky’s mission is **to provide creative regional solutions to relevant and emerging issues in Buncombe, Henderson, Madison, and Transylvania counties while providing a standard of excellence in the delivery of federal, state, and regional services for our member communities.** ▲

## From the Executive Director



**Bill Tingle, PG, CFM**  
**NCAFP Executive**  
**Director**

We are approaching the time of the year when we will begin seeing “2017 - A Year in Review” stories on television, websites, Facebook, etc. I considered including a “2017- NCAFP’s Year in Review” section for this article, but I soon found that a thorough review would be way too long. However, a good summary of some of the numerous NCAFP’s efforts and accomplishments this year can be found by reading the other articles, written by knowledgeable authors, found in this issue of *FlashFlood News* as well as the spring issue, which you can read on our website. Articles in this issue include a great message from our chair, David Key; a very thorough article by State NFIP Coordinator Dan Brubaker that hits on several very relevant and useful topics; summaries of past and upcoming NCAFP and ASFPM conferences; education and outreach efforts (thanks to Dan Tomczak and his dedication to these efforts); benefits of board membership (great article Mr. Fullerton); Smart Vent’s flood proofing article, impacts of building code adoption on CRS, and more. I was especially happy to see that one of the most important cogs that keeps NCAFP running was duly recognized for her outstanding efforts to enhance the quality of life in her community.....Congratulations Susan!!

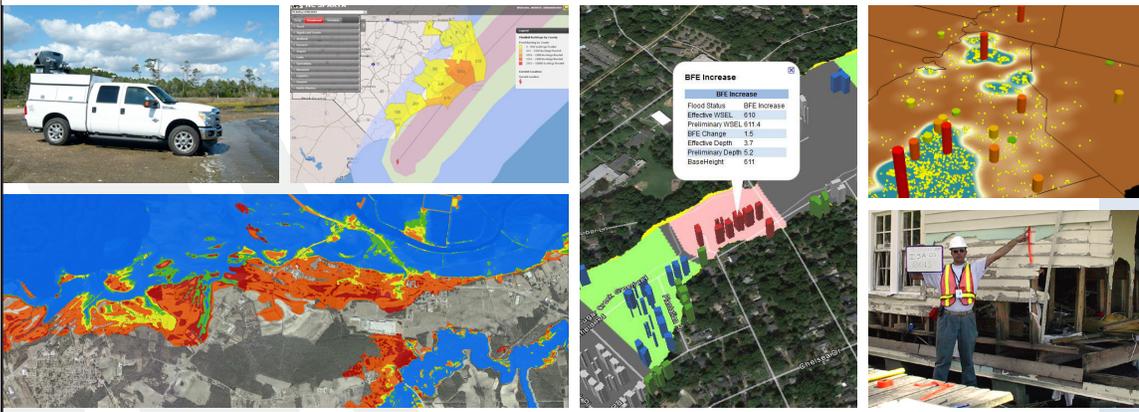


*Kelly Keesling*

Providing information to everyone about our accomplishments in 2017 (and many past years) would not be possible without the dedication and efforts of likely the most vital individual in this organization, Kelly Keesling. This newsletter, the website, conference, and membership administration would not be possible without her amazing effort and dedication to NCAFP. Kelly’s tenacity (maybe bugging the board a little too much?) has allowed NCAFP’s accomplishments to be known by floodplain managers in North Carolina and across the country, helping us to become a top, well respected state floodplain management association. However, the most incredible fact is that she does this with a positive, uplifting, humorous attitude while facing tremendous adversity and challenges in her life. Her faith and hope are an inspiration to me and I’m sure many others. Godspeed Kelly! ▲

*Bill*

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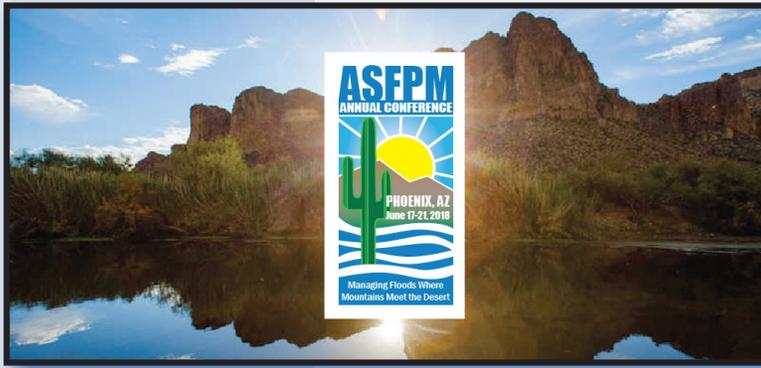
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*FlashFlood News*, published twice a year, is funded by the generosity of consultant and vendor sponsors. By sponsoring, your company has the option of placing an ad in the newsletter. Please see the [Media Kit](#) on our website with details about the newsletter and sponsorship options/ad sizes. We hope that you will consider sponsoring our next newsletter (Spring 2018). If you are interested in sponsoring or would like more information, please contact Kelly Keesling at [kgkeesling@carolina.rr.com](mailto:kgkeesling@carolina.rr.com).



## ASFPM 2018 Annual Conference

The Association of State Floodplain Managers will convene the world's largest and most comprehensive floodplain management conference – their 42<sup>nd</sup> annual gathering, June 17-21, 2018 at the Phoenix Convention Center in downtown Phoenix, Arizona. You are invited to share your experiences with local, state, regional, tribal and federal officials, industry leaders, consultants and

a wide variety of subject matter experts from diverse fields who will give presentations relevant to the theme, “Managing Floods Where Mountains Meet the Desert.”

The conference is conducted by the Association of State Floodplain Managers, the world's leading voice for sound floodplain management, with 17,400 practitioners, 9,500 Certified Floodplain Managers, 36 chapters, and 73 corporate and agency partners worldwide.

This national conference includes concurrent session presentations that are 30 minutes long including time for Q&A and fit within the standard conference agenda. Concurrent session attendance is included with conference registration. In addition, 2-4 hour workshops which are courses including a syllabus, course objectives, and exercises. Workshops are targeted at offering continuing education for floodplain management professionals. An additional fee is required for attending these workshops. The CFM exam is also offered during the conference — please submit your application as explained on the NCAFPM website's Certification page.

For more information, please go to [asfpmconference.org](http://asfpmconference.org). ▲

### Upcoming ASFPM Annual Conferences

Phoenix, Arizona  
June 17-21, 2018

Cleveland, Ohio  
May 19-24, 2019

Fort Worth, Texas  
June 7-12, 2020



The CFM exam is offered at both our spring and fall conferences. Other opportunities will be listed on our website as they are scheduled. Application must be submitted at least two weeks before the test. All information is available on the [NCAFPM Certification webpage](#).

## CFM NEWS | ASFPM

### New Certified Floodplain Managers - 2017

The following people have passed the CFM exam in 2017. Congratulations!

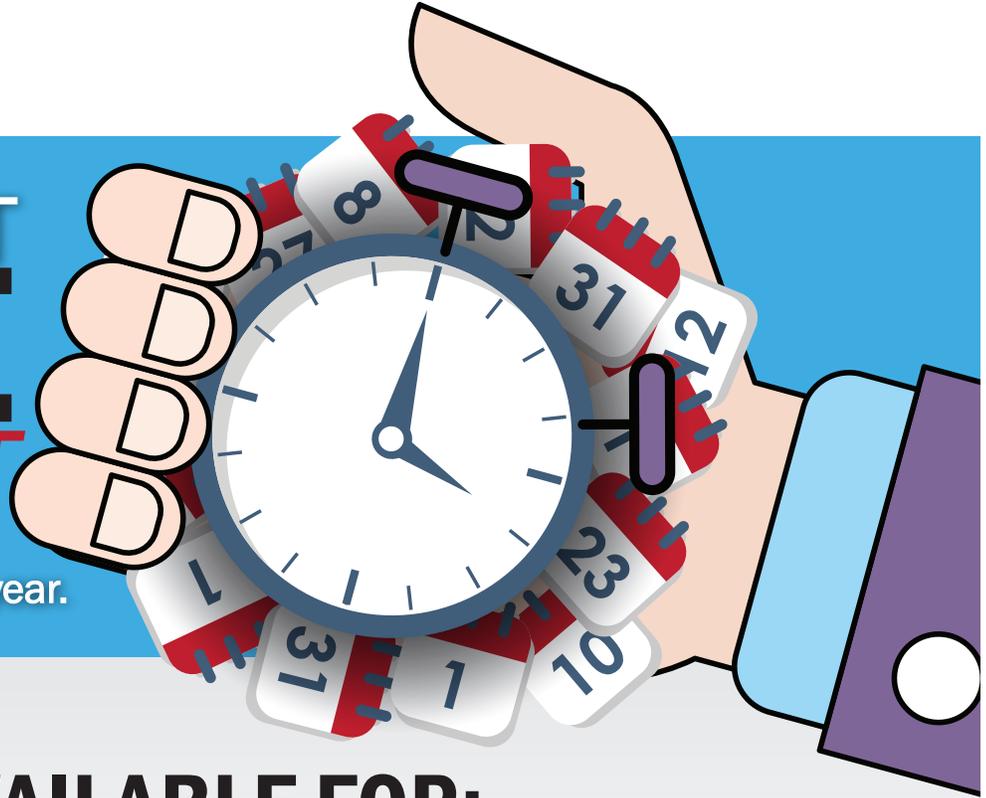
Klaus Albertin, CH2M Hill, Inc.  
Christy Armstrong, City of Durham  
Matthew Boswell, City of New Bern  
Vivian Bou Gomez, City of Greensboro  
Katina Braswell, Edgecombe County  
Joshua Cash, NCDEM  
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Mary Clark, Wake County  
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# DON'T LET TIME RUN OUT

...get your CE credits before the end of the year.



## CREDITS AVAILABLE FOR:

- Surveyors
- Engineers
- Code Officials
- CFMs
- Architects

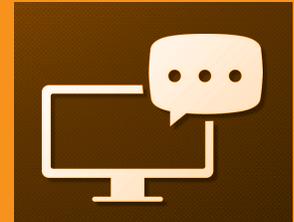
### HOW IT WORKS?

**Learn & Earn** to help protect those susceptible to flooding. Proper wet and dry floodproofing techniques have saved lives and structures from collapse - *all without causing adverse impacts.*

### SIGN UP TODAY

By scheduling an online or in person training session.

Call (877) 441-8368 or send and email to [ceu@smartvent.com](mailto:ceu@smartvent.com).



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Floodplain Managers  
Board of Directors  
2017-2018

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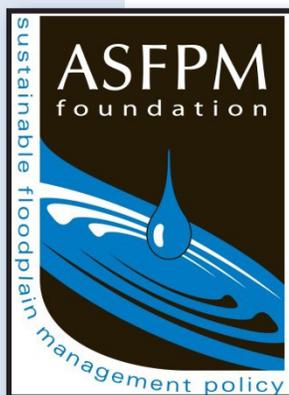
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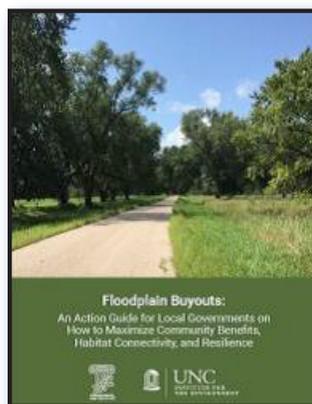
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# ASFPM News

(Articles are reprinted with permission from  
ASFPM's *News & Views*, October 2017)

## Floodplain Buyouts: An Action Guide for Local Governments on How to Maximize Community Benefits, Habitat Connectivity & Resilience



This Action Guide, created by the Environmental Law Institute and the **University of North Carolina Institute for the Environment**, is designed to help local governments across the country leverage hazard mitigation buyouts to protect, restore and connect habitats in local communities. Greatly informed by the information gathered through in-depth case studies and conversations with key players in local buyout programs, the Guide highlights management approaches that will be useful and practicable for the local officials and managers who have the ability to target their acquisitions in ways that improve habitat connectivity and resilience while also reducing flood hazards. Click the graphic or [this link](#) to download the Action Guide. ▲

## ASFPM Foundation Future Leaders Scholarship

The ASFPM Foundation is in the final stages of establishing a two-year undergraduate scholarship, commencing next fall. It is designed to advance flood-risk management research and practice. The ASFPM Foundation Future Leaders Scholarship will be awarded every other year to a deserving college student entering their junior year. The foundation has established eligibility criteria, and along with a demonstration of financial need, the student must be pursuing a course of study related to the missions of the ASFPM and ASFPM Foundation. Also, after graduation it is expected that the student will work in a profession that directly or indirectly supports the flood risk management field.

The 2018 scholarship will award up to \$25,000 per year for two years in direct financial assistance for tuition, books, etc. The selected scholar will also receive mentoring support and assistance from the foundation in finding a paid summer internship in a relevant professional setting.

In mid-November, the applications and submittal instructions for the 2018 ASFPM Foundation Future Leaders Scholarship were posted on the [ASFPM Foundation website](#). A complete application for the scholarship, with all attachments, must be received on or before January 31, 2018. The selected scholarship recipient will be announced in April.

The foundation is developing a pamphlet with more information on the scholarship, which will provide details on eligibility and additional selection criteria. ASFPM members and chapters are encouraged to share the pamphlet with students, high schools, colleges and universities.

The ASFPM Foundation is proud to be contributing to the future of the floodplain man-

— *continued on next page*

agement and flood-risk reduction profession. The ASFPM Foundation Future Leaders Scholarship is a key component of, and an investment in, the foundation's effort to advance knowledge that promotes sound floodplain management policy and practice. ▲

## How to Map Open Space for Community Rating System Credit

NOAA produced an interactive, online "how-to" and the companion GIS Workflow and Mapping Guide to help communities earn credits in FEMA's Community Rating System program by mapping and documenting preserved open space. These products respond to interest from coastal communities in the CRS and requests for technical help with GIS mapping. They can be found at [coast.noaa.gov/digitalcoast/training/crs.html](http://coast.noaa.gov/digitalcoast/training/crs.html).

Under the CRS, participating communities can earn discounts on NFIP flood insurance policy premiums through their efforts to reduce flood risk, including preservation of open space in flood hazard areas. These new resources help communities identify places where they could earn credit for existing and future efforts to preserve open space in floodplains.

The "how-to" walks you through a seven-step process — from mapping to documentation of preserved open space. This guide is geared for community CRS coordinators and planners. The companion GIS workflow provides geospatial analysts with sources of data, information and instruction needed for key mapping tasks. ▲

## ASFPM Member Alerts

### ASFPM & Partners Want To Hear From Elected Officials, Community Planners, Floodplain and Emergency Managers, and Others Involved In Coastal Management

The Association of State Floodplain Managers is currently working to strengthen coastal community resilience through the development of a web-based coastal management training guide and an in-person training program for coastal counties in partnership with the National Association of Counties, Coastal States Organization and National Oceanic and Atmospheric Administration's Office for Coastal Management.

The first step in this process is a survey that seeks to determine what coastal management strategies communities are employing, and how local elected officials and professional staff communicate regarding coastal management issues. The survey will only take a few minutes to complete, and is targeted toward elected officials, community planners, floodplain and emergency managers, and others involved in coastal management.

The information you provide will allow ASFPM to better identify resources and support communities with improving community resilience nationwide. The outcomes of this project will influence development of the Strengthening Coastal Communities Resilience program, from the online guide to the in-person workshops.

Please complete the survey ([naco.org/CoastalCommunitiesSurvey](http://naco.org/CoastalCommunitiesSurvey)) to the best of your ability to help compile as comprehensive an inventory as possible. Thank you in advance for your participation. ▲

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## CRS Flood Insurance Discounts (from front page)

Twenty-three communities now receive a 15% CRS credit and will be prevented from qualifying for higher discounts. Nine of those coastal communities are already capped at that level due to the wind-borne debris codes, landward of the barrier islands. It is important to note that this CRS cap applies only to flood insurance rates — and only in communities that volunteer to join the CRS discount program. The cap does not affect wind or general homeowners policies.

— continued on next page

### Exhibit A

#### NC Community Rating System Communities with Flood Insurance Discounts of 15% or Higher

##### Discount Will Drop to 15%

Source: Flood Insurance Manual Oct. 1, 2017

| Community                          | Policies      | Coverage                 | Premiums           | Present CRS % | Annual Lost Discount*              |
|------------------------------------|---------------|--------------------------|--------------------|---------------|------------------------------------|
| CHARLOTTE, CITY OF                 | 2,759         | \$688,580,700            | \$1,780,226        | 30            | \$381,477                          |
| KINSTON, CITY OF                   | 332           | \$73,235,400             | \$362,073          | 25            | \$48,276                           |
| NORTH TOPSAIL BEACH, TOWN OF       | 1,289         | \$253,993,600            | \$1,831,732        | 25            | \$244,231                          |
| TOPSAIL BEACH, TOWN OF             | 1,131         | \$293,688,300            | \$1,609,814        | 25            | \$214,642                          |
| WILSON, CITY OF                    | 470           | \$109,640,500            | \$407,561          | 25            | \$54,341                           |
| <b>KILL DEVIL HILLS, TOWN OF</b>   | <b>4,291</b>  | <b>\$1,003,179,900</b>   | <b>\$2,760,896</b> | <b>20</b>     | <b>\$172,556</b>                   |
| <b>KITTY HAWK, TOWN OF</b>         | <b>1,541</b>  | <b>\$400,445,200</b>     | <b>\$1,434,609</b> | <b>20</b>     | <b>\$89,663</b>                    |
| MECKLENBURG COUNTY, unincorporated | 337           | \$90,336,600             | \$217,875          | 20            | \$13,617                           |
| <b>NAGS HEAD, TOWN OF</b>          | <b>3,521</b>  | <b>\$969,305,300</b>     | <b>\$3,170,700</b> | <b>20</b>     | <b>\$198,169</b>                   |
| ORANGE COUNTY, unincorporated      | 87            | \$24,822,800             | \$39,271           | 20            | \$2,454                            |
| <b>PINE KNOLL SHORES, TOWN OF</b>  | <b>1,387</b>  | <b>\$324,639,200</b>     | <b>\$828,936</b>   | <b>20</b>     | <b>\$51,809</b>                    |
| PINEVILLE, TOWN OF                 | 58            | \$16,695,800             | \$59,912           | 20            | \$3,745                            |
| ROCKY MOUNT, CITY OF               | 914           | \$211,322,400            | \$867,510          | 20            | \$54,219                           |
| <b>SOUTHERN SHORES, TOWN</b>       | <b>1,182</b>  | <b>\$352,371,600</b>     | <b>\$1,064,490</b> | <b>20</b>     | <b>\$66,531</b>                    |
| WAYNE COUNTY, unincorporated       | 341           | \$68,228,600             | \$219,629          | 20            | \$13,727                           |
|                                    | <b>19,640</b> | <b>Policies affected</b> |                    |               | <b>\$1,609,457</b>                 |
|                                    |               |                          |                    |               | <b>Annual Discount To Be Lost*</b> |

##### Discount Capped at 15%

|   |               |                          |                     |           |   |
|---|---------------|--------------------------|---------------------|-----------|---|
| <b>BEAUFORT, TOWN OF †</b>                | <b>839</b>    | <b>\$216,920,800</b>     | <b>\$686,467</b>    | <b>15</b> |   |
| <b>BELHAVEN, TOWN OF</b>                  | <b>450</b>    | <b>\$67,561,800</b>      | <b>\$384,452</b>    | <b>15</b> |   |
| BOONE, TOWN OF                            | 250           | \$52,162,100             | \$199,165           | 15        |   |
| <b>CAMDEN COUNTY, unincorporated †</b>    | <b>874</b>    | <b>\$201,142,700</b>     | <b>\$613,997</b>    | <b>15</b> |   |
| <b>CAROLINA BEACH, TOWN OF</b>            | <b>3,577</b>  | <b>\$698,020,700</b>     | <b>\$3,005,150</b>  | <b>15</b> |   |
| <b>CARTERET COUNTY, unincorporated. †</b> | <b>3,841</b>  | <b>\$878,047,400</b>     | <b>\$2,835,205</b>  | <b>15</b> |   |
| <b>CASWELL BEACH, TOWN OF</b>             | <b>642</b>    | <b>\$139,284,100</b>     | <b>\$540,656</b>    | <b>15</b> |   |
| <b>DARE COUNTY, unincorporated †</b>      | <b>9,176</b>  | <b>\$2,265,281,400</b>   | <b>\$6,252,805</b>  | <b>15</b> |   |
| <b>DUCK, TOWN OF</b>                      | <b>817</b>    | <b>\$259,352,800</b>     | <b>\$774,822</b>    | <b>15</b> |   |
| <b>EMERALD ISLE, TOWN OF</b>              | <b>2,753</b>  | <b>\$692,788,500</b>     | <b>\$2,545,009</b>  | <b>15</b> |   |
| FARMVILLE, TOWN OF                        | 71            | \$19,491,800             | \$28,906            | 15        |   |
| GREENVILLE, CITY OF                       | 1,158         | \$256,029,500            | \$762,298           | 15        |   |
| GRIFTON, TOWN OF                          | 79            | \$15,284,400             | \$64,241            | 15        |   |
| <b>JACKSONVILLE, CITY OF †</b>            | <b>591</b>    | <b>\$165,200,200</b>     | <b>\$292,763</b>    | <b>15</b> |   |
| LENOIR COUNTY, unincorporated             | 176           | \$29,658,000             | \$111,612           | 15        |   |
| LEXINGTON, CITY OF                        | 27            | \$7,695,700              | \$31,785            | 15        |   |
| <b>MANTEO, TOWN OF †</b>                  | <b>734</b>    | <b>\$176,794,300</b>     | <b>\$520,599</b>    | <b>15</b> |   |
| <b>ONslow COUNTY, unincorporated †</b>    | <b>1,781</b>  | <b>\$468,778,700</b>     | <b>\$958,335</b>    | <b>15</b> |   |
| <b>PITT COUNTY, unincorporated</b>        | <b>408</b>    | <b>\$89,676,800</b>      | <b>\$223,892</b>    | <b>15</b> |   |
| <b>SUNSET BEACH, TOWN OF †</b>            | <b>1,755</b>  | <b>\$451,618,000</b>     | <b>\$1,182,476</b>  | <b>15</b> |   |
| TARBORO, TOWN OF                          | 274           | \$56,174,200             | \$164,489           | 15        |   |
| WASHINGTON, CITY OF                       | 1,260         | \$212,806,800            | \$1,150,212         | 15        |   |
| <b>WRIGHTSVILLE BEACH, TOWN OF †</b>      | <b>2,694</b>  | <b>\$673,693,300</b>     | <b>\$2,833,424</b>  | <b>15</b> |   |
|   | <b>34,227</b> | <b>Policies affected</b> | <b>\$26,162,760</b> |           | <b>\$1,538,986</b>                                    |
|   |               |                          |                     |           | <b>Potential Annual Discounts Prevented from 20%*</b> |

\* Assumes all insured buildings are in the Special Flood Hazard Area and present discounts are applied to premiums effective 03/31/2017.

† Communities already capped at 15% due to wind-borne debris standards

## CRS Flood Insurance Discounts (from page 16)

Future BCEGS reviews are expected to be scheduled to precede the next CRS reviews that are pending in many coastal communities over the next two years. The following table (Exhibit B) lists the expected impact of the building code age on the CRS cap, assuming the NC codes are updated every six years and the I-Codes every three years.

Any BCEGS reviews conducted in 2017-18 or 2022-24 appear likely to lose 72% of their score, making BCEGS Class 5 unattainable and resulting in a CRS cap of 15% in the next review. BCEGS reviews in 2021 will lose 15% of their total points due to a building code age of 6 years. Other BCEGS scores will determine if the community can maintain a Class 5 or better rating, and therefore whether the CRS discounts will be capped.

For questions or more information, contact Spencer Rogers at the North Carolina Sea Grant Extension Program: 910-962-2491 or [rogerssp@uncw.edu](mailto:rogerssp@uncw.edu). ▲

## Exhibit B

### BCEGS Age of NC Building Code

| Date               | NC Code Version | NC I-Code Basis | Latest I-Code | NC Code BCEGS Age | BCEGS Code Age Impact on Total Score | CRS                            |
|--------------------|-----------------|-----------------|---------------|-------------------|--------------------------------------|--------------------------------|
| <b>31-Dec 2017</b> | <b>2012</b>     | <b>2009</b>     | <b>2015</b>   | <b>8</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>1-Jan 2018</b>  | <b>2012</b>     | <b>2009</b>     | <b>2018</b>   | <b>9</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>31-Dec 2018</b> | <b>2012</b>     | <b>2009</b>     | <b>2018</b>   | <b>9</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| 1-Jan 2019         | 2018            | 2015            | 2018          | 4                 | 100%                                 | No CRS cap for code age        |
| 31-Dec 2019        | 2018            | 2015            | 2018          | 4                 | 100%                                 | No CRS cap for code age        |
| 1-Jan 2020         | 2018            | 2015            | 2018          | 5                 | 100%                                 | No CRS cap for code age        |
| 31-Dec 2020        | 2018            | 2015            | 2018          | 5                 | 100%                                 | No CRS cap for code age        |
| <b>1-Jan 2021</b>  | <b>2018</b>     | <b>2015</b>     | <b>2021</b>   | <b>6</b>          | <b>85%</b>                           | <b>?</b>                       |
| <b>31-Dec 2021</b> | <b>2018</b>     | <b>2015</b>     | <b>2021</b>   | <b>6</b>          | <b>85%</b>                           | <b>?</b>                       |
| <b>1-Jan 2022</b>  | <b>2018</b>     | <b>2015</b>     | <b>2021</b>   | <b>7</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>31-Dec 2022</b> | <b>2018</b>     | <b>2015</b>     | <b>2021</b>   | <b>7</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>1-Jan 2023</b>  | <b>2018</b>     | <b>2015</b>     | <b>2021</b>   | <b>8</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>31-Dec 2023</b> | <b>2018</b>     | <b>2015</b>     | <b>2021</b>   | <b>8</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>1-Jan 2024</b>  | <b>2018</b>     | <b>2015</b>     | <b>2024</b>   | <b>9</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>31-Dec 2024</b> | <b>2018</b>     | <b>2015</b>     | <b>2024</b>   | <b>9</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |
| <b>1-Jan 2025</b>  | <b>2024</b>     | <b>2021</b>     | <b>2024</b>   | <b>4</b>          | <b>100%</b>                          | <b>No CRS cap for code age</b> |
| <b>31-Dec 2025</b> | <b>2024</b>     | <b>2021</b>     | <b>2024</b>   | <b>4</b>          | <b>100%</b>                          | <b>No CRS cap for code age</b> |
| 1-Jan 2026         | 2024            | 2021            | 2024          | 5                 | 100%                                 | No CRS cap for code age        |
| 31-Dec 2026        | 2024            | 2021            | 2024          | 5                 | 100%                                 | No CRS cap for code age        |
| <b>1-Jan 2027</b>  | <b>2024</b>     | <b>2021</b>     | <b>2027</b>   | <b>6</b>          | <b>85%</b>                           | <b>?</b>                       |
| <b>31-Dec 2027</b> | <b>2024</b>     | <b>2021</b>     | <b>2027</b>   | <b>6</b>          | <b>85%</b>                           | <b>?</b>                       |
| <b>1-Jan 2028</b>  | <b>2024</b>     | <b>2021</b>     | <b>2027</b>   | <b>7</b>          | <b>28%</b>                           | <b>CRS capped at 15%</b>       |

Assumes NC building codes will be updated every 6 years and I-Codes updated every 3 years

# Rethinking Floodproofing Technology:

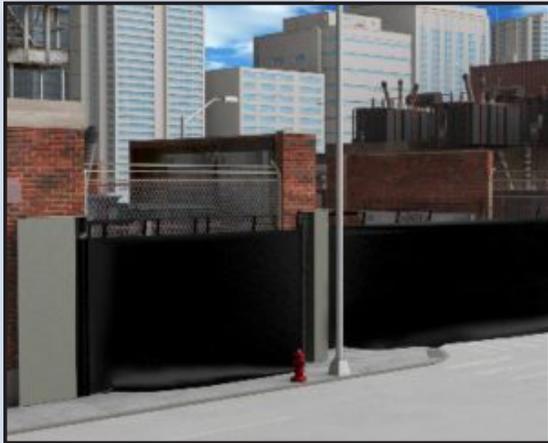
## Recent Floods Have Shown System Deployment Time Should Not Be Overlooked

SMART VENT, INC.

Storms, climate change, natural disasters such as earthquakes, and even terrorism threats have exponentially elevated the risk of flood damage. In addition to the hurricanes and catastrophic events that make national headlines, flooding is happening somewhere in the United States every day (even in desert regions), caused by heavy rainfall, dam failures, land development runoff, drainage problems, or inland remnants of tropical storms. Nationwide, flooding is the leading cause of deaths related to severe weather. It also has a significant effect on businesses—according to the National Flood Insurance Program (NFIP), almost 40 percent of small businesses never reopen their doors after a flood disaster.

### The Challenge of Traditional Flood-Protection Solutions

Until now, buildings located in flood-prone areas have only had a few flood-protection options. Historically, the most common has been the stop-log system — an assembly of vertical, slotted posts holding stacks of horizontal rectangular “logs” that can be erected to form a barrier around the building or its critical doorways and openings. The most significant issue with stop logs (and similar aluminum-sheet barricades) is storage. The materials must be kept either onsite in what could otherwise be valuable, revenue-generating space, or stored offsite, often at some distance from the building they are intended to protect. It can take a week or more to retrieve the truckloads of materials for erecting a barrier around the perimeter of a typical commercial or government building.



For weather-related events, this can mean having to decide whether or not to deploy before forecast models have reached a consensus about storm paths and severity. Deploying unnecessarily is expensive, but hesitating can be catastrophic. Further, because of the unpredictable

nature of earthquakes or dam breaks, or terror-related acts that can cause flooding, it can be virtually impossible to retrieve and erect a stop-log or barricade system in time.

### The Need for Quick-Deployment Solutions

Recognizing the weaknesses in existing flood-mitigation technology, new dry floodproofing technology has emerged in the form of flexible barriers that offer versatility and resiliency. This new concept of using soft goods as opposed to hard materials allows for a system that offers full protection with equipment that can be stored in place and deployed rapidly by building maintenance or security staff.

Design objectives for this new technology were established after a careful analysis of available systems. They include:

- point-of-use storage to allow the facility to stay open until the last possible moment, and reopen faster for better business continuity;
- quick-deployment architecture to ensure minimal setup times;
- low maintenance based on minimal mechanical complexity;
- high reliability, proven via simple designs and robust construction;
- lightweight materials to facilitate safe, rapid manual operation;
- conformal materials adaptable to any opening; and
- scalability (i.e. easily sized and configured to structural profile and expected loading).

Flood-mitigation products have various application points, including building entrances, stairwells, doors, below-grade window wells, ventilation shafts, intake/exhaust openings, parking garage portals, loading dock portals, emergency exits, and rail and vehicular tunnel portals.

The new solutions addressing these points include flexible walls, gates, covers, and plugs. Together, these “soft” systems represent an advanced structural technology that can meet the resiliency needs of government and commercial buildings and infrastructure worldwide.

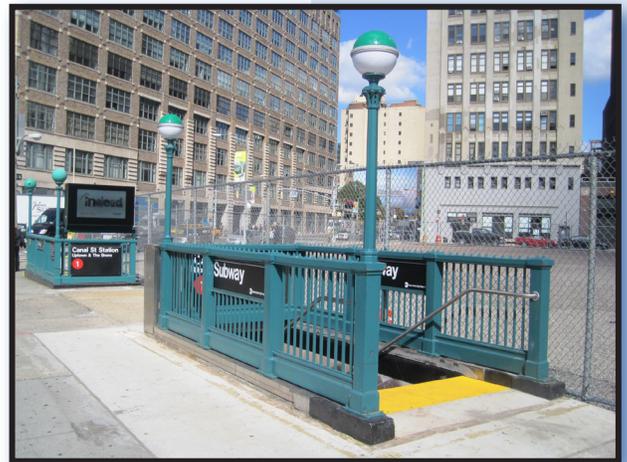
For commercial and government buildings, the most commonly used option for this new technology is the flexible wall barrier. It uses a flexible Kevlar® composite woven into an extremely tough mesh fabric with a polyurethane-coated nylon to serve as the water barrier retention layer.

Although the flexible wall barrier is supported by rugged structural members, its soft-goods base means the system can be deployed easily by one or two people, often in a matter of minutes. Even a full-perimeter, 2.5-m (8-ft) flexible wall barrier can be erected around a typical commercial building in a matter of a few hours, because all materials are stored at the point of use and only have to be extended and locked in place.

Once conditions are safe, the flexible wall systems can be stowed as efficiently as they are deployed. After a flood, resumption of normal operation can be expected in hours or a day or two, depending on cleanup requirements—rather than the days or weeks required to clean, dismantle, and cart the components of stop-log or aluminum-plate systems to storage facilities. If no flooding occurs, the flexible wall stows quickly and normal operations can usually be resumed in the same amount of time required to deploy.

The flexible wall barrier system allows this because it is typically installed in a horizontal trench just below grade, an embedment in a wall, or in a vertical container installed at the side of a doorway or portal opening. As the wall material is flexible, it can be packed into a small container. For instance, the flexible barrier portion of a 2.5-m vertical wall fits in a space just 200 x 200 mm (8 x 8 in.). Total trench cross-section, then, can be that small space for the wall, plus enough additional room for the flat-lying support posts.

With such small size, the flexible wall barrier system requires minimal infrastructure modification for installation. The flexible wall can be scaled in height and length to fit any application. Since it is self-contained, no special tools or training are required.



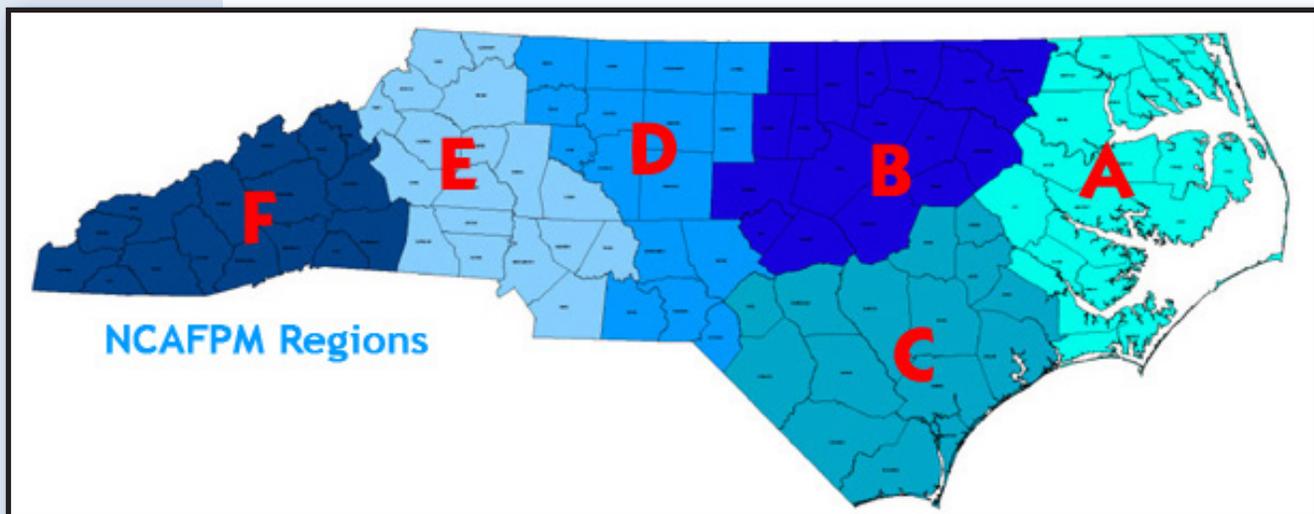
## Conclusion

Recent floods has shown the importance of deployment time for infrastructure flood-protection systems. The devastating damage and economic loss totals, as well as the loss of life, from Hurricane Sandy demonstrated current floodproofing techniques are useless when not deployed in time.

The traditional systems employing solid metal barriers or logs require massive storage space and extensive setup and deployment time. The dry floodproofing concept, on the other hand, relies on flexible, soft goods stored at the point of use. It also deploys and retracts rapidly with minimal labor. By addressing these issues with traditional floodproofing, it may be the solution building owners, architects, and builders never knew they needed. ▲

— Please see page 13 for more information about Smart Vent Inc. —

# NCAFPM Regional Reports



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**Region F** | Nathan Pennington, CFM — [nathan.pennington@buncombecounty.org](mailto:nathan.pennington@buncombecounty.org)

North Carolina is divided into six NCAFPM regions. Our Regional Representatives give NCAFPM members in each region a “voice” on our board. Flood plain administrators in these regions can contact their rep who can bring regional issues to the board’s attention (ex. coastal erosion, flash flooding and landslides in the mountains, etc.). The map above shows the regions in a graphical format, and here is a list of the counties in each region.

**Region A** | Beaufort, Bertie, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, Martin, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, and Washington

**Region B** | Chatham, Durham, Edgecombe, Franklin, Granville, Halifax, Harnett, Johnston, Lee, Nash, Northampton, Orange, Person, Vance, Wake, Warren, and Wilson

**Region C** | Bladen, Brunswick, Columbus, Cumberland, Duplin, Greene, Hoke, Jones, Lenoir, New Hanover, Onslow, Pender, Robeson, Sampson, and Wayne

**Region D** | Alamance, Anson, Caswell, Davidson, Davie, Forsyth, Guilford, Montgomery, Moore, Randolph, Richmond, Rockingham, Scotland, Stokes, Surry, and Yadkin

**Region E** | Alexander, Alleghany, Ashe, Avery, Burke, Cabarrus, Caldwell, Catawba, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, Union, Watauga, and Wilkes

**Region F** | Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, and Yancey

## Region B

Randy Mundt,  
AICP, CFM

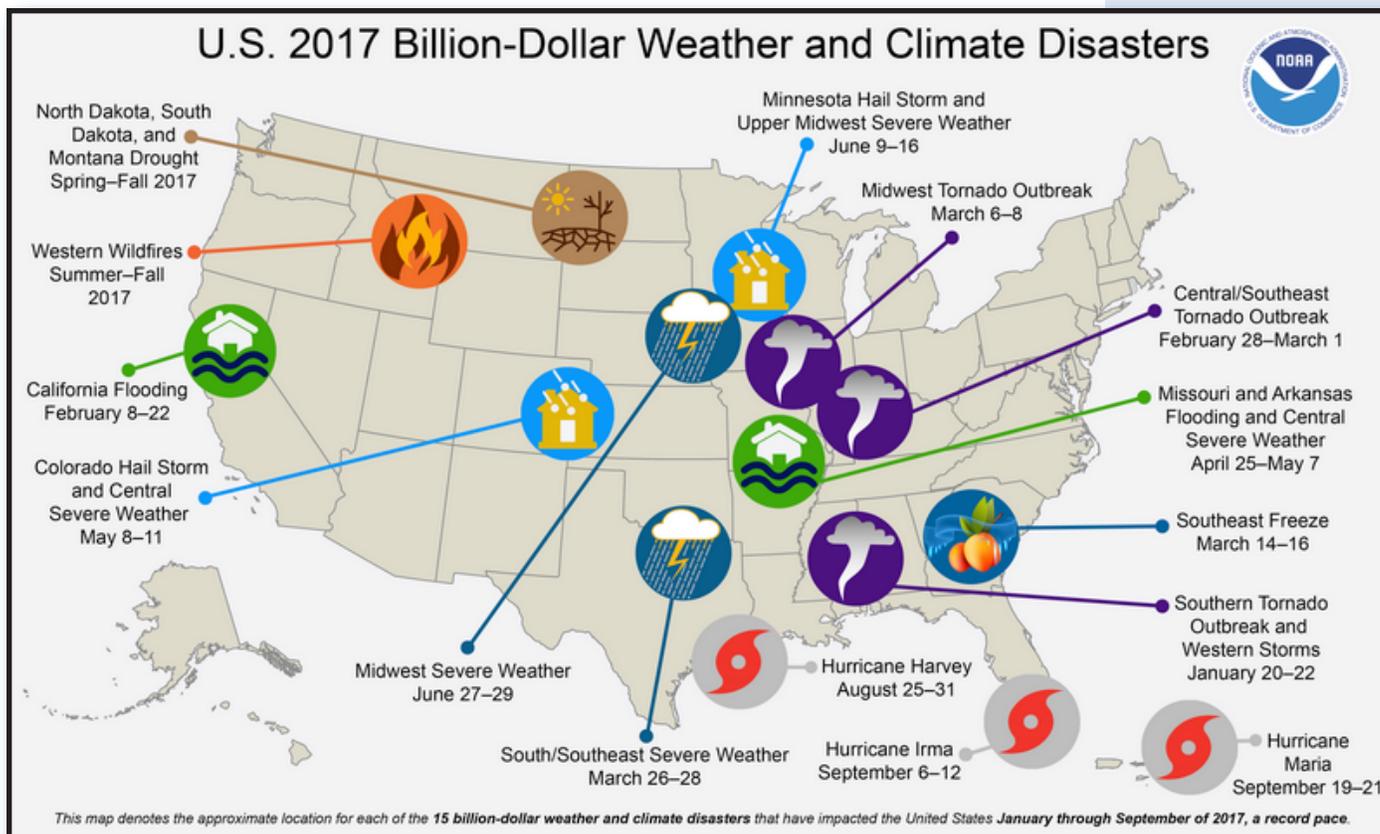
Unfortunately, our Region B flood plain administrators and others are still wading through (no pun intended) their additional burdens that recovering from Matthew left to their workload, and therefore had no time to send any morsels for the Region B report. We hope to have some updates for you in the next issue of *FlashFlood*.

## Regional Reports (from previous page)

Did you know that Asheville, in western North Carolina, serves as the headquarters for the National Centers for Environmental Information (NCEI)? The facility was formerly known as the National Climatic Data Center and is the result of the culmination of the aforementioned Center and the National Geophysical Data Center, the National Oceanographic Data Center, and the National Coastal Data Development Center. The organization provides a clearinghouse of regional, national, and even global information related to weather keeping records, maps, graphs, climate extremes, and natural disaster information including hurricane and flood data. This represents only a small sampling of the vast amount of information the data center is responsible for tracking.

## Region F

Nathan Pennington, CFM



Find out more about NCEI at [ncei.noaa.gov](http://ncei.noaa.gov) OR [ncdc.noaa.gov/about](http://ncdc.noaa.gov/about). This is a sample map (clickable on their website at [ncdc.noaa.gov/billions](http://ncdc.noaa.gov/billions)) that provides a snapshot of billion dollar US weather disasters. ▲

## FEMA News You Can Use

### Increased Cost of Compliance Policy Rate Increase April 1

In a Sept. 29 memorandum announcing the April 1, 2018 and January 1, 2019 program changes, FEMA announced there would be no changes to ICC premiums. However, after further consideration, FEMA is increasing ICC premiums, effective April 1, 2018, according to a bulletin from David Maurstad, FEMA's assistant administrator for federal insurance. ICC premiums have remained constant for several years. To maintain program integrity and stability, FEMA has determined that ICC premiums must increase to keep pace with increased costs due to inflation over the years. [Read the full bulletin here.](#)



# NFIP Coordinator's Corner

Dan Brubaker, PE, CFM  
NFIP State Coordinator

919-825-2300  
[dan.brubaker@ncdps.gov](mailto:dan.brubaker@ncdps.gov)  
[www.ncfloodmaps.com](http://www.ncfloodmaps.com)



## Hungry for Flood Resilience

Greetings, everyone. We seem to be well into the “sweater-days” of the year, when thoughts often turn from summer storms and hurricanes to more autumnal pursuits (in my case, Peanuts holiday specials and first-frost collard greens). However, while the oceans are still warm, tropical development is a possibility.

## Resilient Redevelopment

I recently participated in a series of workshops in Princeville, Fair Bluff, Seven Springs, and Windsor. All of these communities were significantly damaged by flooding during Hurricane Matthew and they are wrestling with how to recover from such a blow in an already depressed economy. The reports for these visits are still being developed, but I had several early impressions.

All of these towns grew up near their respective rivers, mainly for economic reasons. Flooding occurred and was relatively well understood, but the proximity of the river outweighed the inconvenience of occasional recovery and cleanup. As the towns grew, other structures and businesses that would have been built on higher ground were instead built in the areas already developed, namely near the rivers. Shops and restaurants cannot recover as quickly as a warehouse, and inevitably, they suffered much more when the flood occurred.

How to recover? As I said at the Princeville meeting, “If the answer was easy, we would not need to be here.” Many voices and perspectives were considered, and although everyone agreed something needed to change, the answers did not obviously present themselves. But change is inevitable and necessary for survival. Someone in Fair Bluff put it, “We’re in Year One AF (After the Flood). That’s how we’ll count from now on.”

Planning is key. Kudos to communities, CRS or otherwise, that work to adopt higher standards, occasionally in the face of resistance. These communities understand that their survival depends on every piece of the community (business, residences, and infrastructure) being able to recover quickly. The City of Charlotte particularly deserves congratulations for achieving a CRS rating of 4 (there are only 12 communities with a 4 or better nationwide) AND for having their Floodplain Administrator, Tim Trautman, earn the ASFPM Local Floodplain Manager of the Year at the 2017 Conference in Kansas City (where the barbeque is different, but tasty).

## NC Flood will Debut Soon!

In January, the new NC Flood website ([flood.nc.gov](http://flood.nc.gov)) should be up and running. This website will cater to specific audiences, including property owners, real estate agents, insurance professionals, engineers and surveyors, and community officials. The site is geared for quick access to information with a minimum number of clicks. There will be a wealth of information available on this site, so when it is open, please take a look around and see

how the available information relates to your specific role in floodplain management. See the graphic below for a sneak peek!

The NC Flood website is designed to be mobile friendly. Once it's up, please take a look at it using your preferred platform. If you see any issues, please let us know.

## NFIP Coordinator's Corner

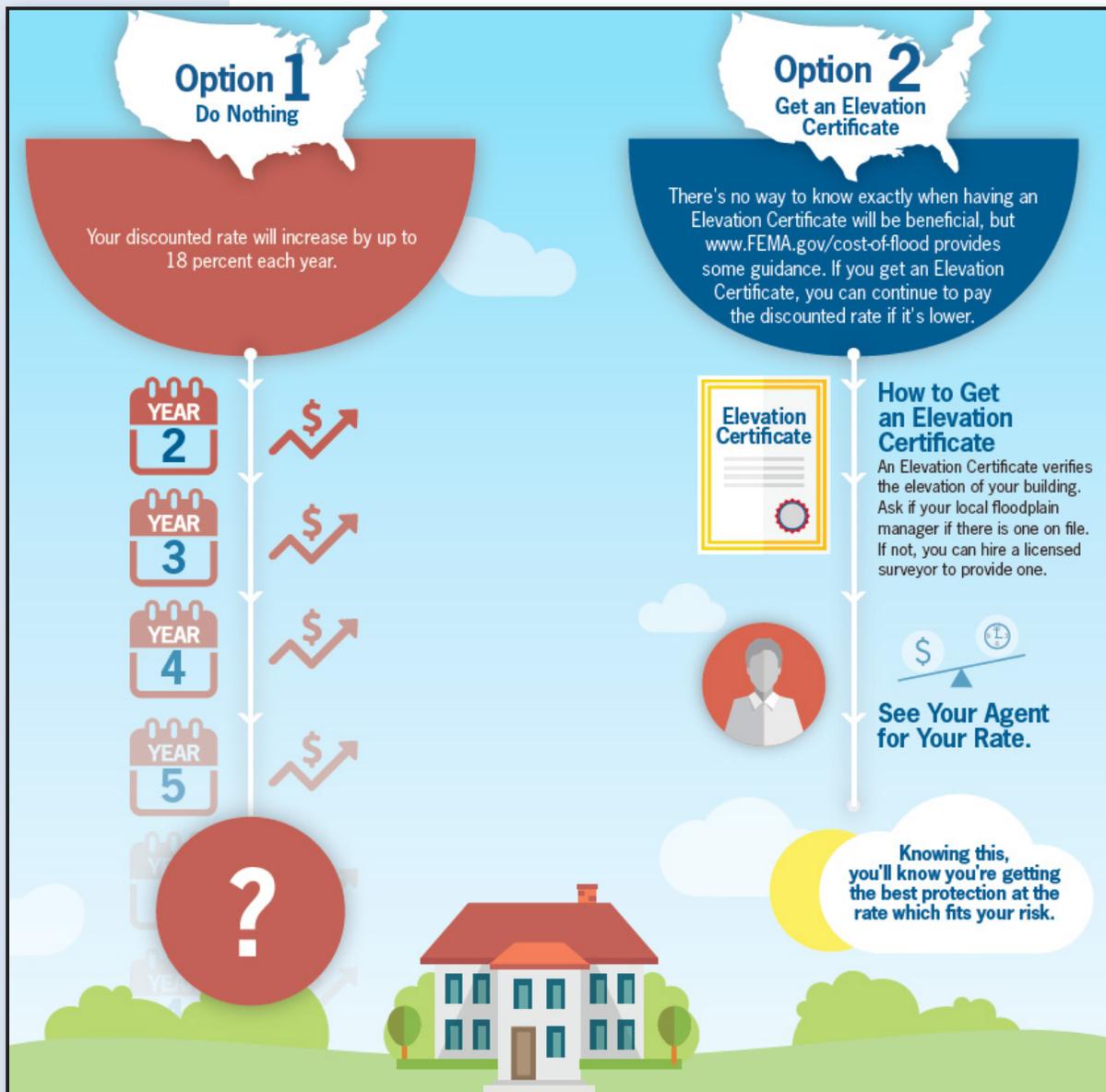
The screenshot shows the flood.NC.gov website. At the top, there is a navigation menu with links for Home, Property Risk, Mapping Program, Find a Document, Events, Floodplain Management, LOMC, Mitigation, Flood Warning, and Industries. Below the menu is a search bar with the text "Search an address" and a "Use my current location" button. The main content area features a large image of a flooded residential neighborhood. A callout box titled "Property Risk" is overlaid on the image, containing the text: "Learn about flood risk at a specific address, to include flood hazard, structural and content impacts, potential insurance rates, mitigation opportunities and the location of flood warning sites near you." Below the image are four icons representing different user roles: Real Estate Agent, Insurance Agent, Professional Engineer/Surveyor, and Community Official. At the bottom, there is a "Contact" section with the following information: NC Floodplain Mapping Program, 4218 Mail Service Center, Raleigh, NC 27699-4218, Phone: 919-715-5711, Fax: 919-715-0408, and Email: frishelp@ncclps.gov.

## CFS Program

The Certified Floodplain Surveyor program has taken some big steps this year. We hosted a group of floodplain administrators from the southeast US, as well as a few from New England, in August. We went through the CFS training program, discussed the advantages of the CFS certification, and offered the exam. We even introduced a few of the attendees to some genuine North Carolina barbeque. In September, we followed that with a trip to Knoxville, Tennessee, when Gary Thompson, Steve Garrett, and I helped Amy Miller set up the nation's second statewide CFS program.

The CFS program provides training to surveyors on MT-1 forms (LOMAs and LOMR-Fs) and Elevation Certificates. Surveyors with a CFS certification can get an expedited review on MT-1 submissions. Also, the CFS list gives citizens an easy source of surveyors who can take care of their Elevation Certificate (EC), LOMA, or LOMR-F needs. As Pre-FIRM structures see increases in flood insurance rates, the demand for ECs will increase. The EC is a property owner's best tool to determine when to transfer from a Pre-FIRM subsidized rate to an actuarial rate. (See next page for graphic.)

— continued on next page



## No-Rise Guidance

The No-Rise Guidance document has been updated to include information on stream restoration projects. Most of the document has not changed. The scope of the updated guidance is very limited, and only applies to small, rural stabilization projects that do not involve structural measures and have no chance to impact buildings, bridges, or culverts. We wanted to define “standard engineering practice” for these types of projects. An Engineer’s Certification will still be required for these projects in order to comply with local ordinance requirements.

Before a local official decides that a hydraulic analysis is not required, please contact our office to confirm that the proposed project meets the requirements of the updated guidance. Dam removal projects and urban stream restoration/stabilization projects will require a hydraulic analysis and either a No-Rise Certification or Conditional Letter of Map Revision approved prior to construction. I’m not sure I can make that any more plain, but there is still misinformation being given to local floodplain administrators. By all means, if you have any questions, please contact our office.

## Training Opportunities

We recently concluded the L-273 course, Managing Floodplain Development Through the NFIP, the week of November 27-30 in Hickory, NC, and offered the CFM exam on Friday, December 1, following the course. Twenty-five students attended the class. We are planning to offer the L-273 course again in March 2018 (location and dates to be determined), so keep in touch if you are interested in attending. North Carolina training courses can be found on the NC Training and Exercise Registration Management System ([terms.ncem.org](http://terms.ncem.org)), where you can register and get more information about the offerings.

We are preparing our training outreach schedule for 2018. If your community is interested in hosting a training activity, such as a 1-day 101 class, 2-day summer workshop, or 5-day L-273/CFM exam, please contact your NFIP Area Planner (Heather Keefer, Milton Carpenter, or Terry Foxx).

FEMA's Emergency Management Institute also offers a wide range of basic and specialty courses relating to floodplain management. Information can be found at

[training.fema.gov](http://training.fema.gov). I encourage ALL floodplain managers to check out the course offerings, including Advanced Concepts I, II, and III; Coastal Construction; and Community Rating System. If you are interested, you will need to send the application through the NC Emergency Management Training Office for their signature before forwarding the application. Your NFIP Area Planner can help you with the application process.



## We're Here for Que You

Mike Sprayberry, the Director of NC Emergency Management, always closes his emails with "What have you done for the counties today?" That is a question we take very seriously. We are dedicated to helping your communities stay resilient and prepared for flooding. North Carolina has a very robust Floodplain Management program, and we very much want your community to be able to recover quickly from a flood. When a flood occurs in your community, we want it to be an **event**, not a **disaster**. To that end, please contact us with questions regarding regulations, floodplain development permits, recovery assistance, training needs, or anything else flood-related.

And, as always, let us know about any new local barbeque joints we need to check out. ▲

# North Carolina Floodplain Mapping Program UPDATE

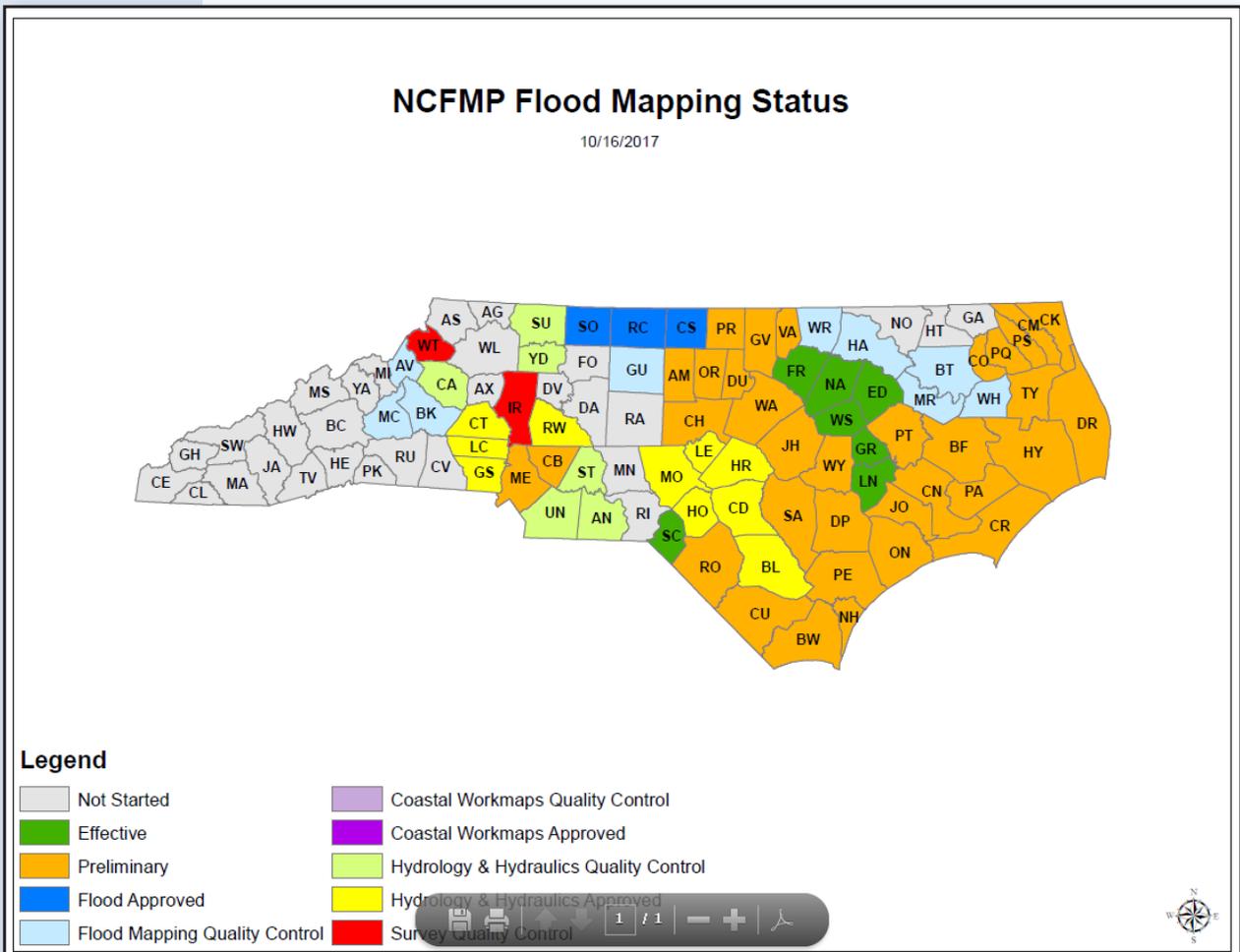
Randy Mundt, AICP, CFM  
 Outreach Coordinator  
 Risk Management  
 Section

919-825-2339  
[randy.mundt@ncdps.gov](mailto:randy.mundt@ncdps.gov)  
[www.ncfloodmaps.com](http://www.ncfloodmaps.com)



Plan. Prepare. Stay informed.  
 Download the ReadyNC app  
 – it's free!  
[www.readync.org](http://www.readync.org)

On November 17, three counties – Alamance, Chatham, and Orange — were the first counties in the US to have their updated FIS and FIRMs go all-digital. This is quite an accomplishment for the State, and was not without growing pains to work through FEMA’s legacy mapping guidelines and standards (ex. cartographic, hard copy maps). This now allows anyone to go online to view all the flood hazard data for these counties. Next in line to have their flood data go effective all digitally will be the counties of Duplin, Johnston, Sampson, and Wayne. We are targeting March 2018 for FEMA to issue the Letter of Final Determination (LFD), which sets the start of the 6-month compliance period for communities to adopt amendments to their Flood Damage Prevention Ordinance (FDPO) to reflect the newer flood risk data. Not including those four counties, there are 26 counties presently in the post-preliminary process which will eventually queue up to become all-digital effective. All 26 of these counties have completed their statutory 90-day appeal period. We have a small number of coastal counties that have submitted challenges and associated data that we’ll review and potentially incorporate, which will necessitate a revised preliminary issuance that will carry a new 90-day review period. We are coordinating with FEMA on developing the schedule for LFDs for 2018, as well as working through the next several rounds of preliminary FIS/FIRM issuance. We anticipate that Caswell, Rockingham, and Stokes counties will be the next group to be issued, likely in the spring of 2018. ▲



# Emergency Management Institute Recently Announced 2018 Courses with a Floodplain Management and/or Mitigation Focus



|                        |  |
|------------------------|--|
| Jan. 22 – 25, 2018     | E0273 Managing Floodplain Development thru the NFIP  |
| Feb. 5 – 8, 2018       | E0284 Advanced Floodplain Management Concepts III <ol style="list-style-type: none"> <li>1. Floodway Standards (1 day).</li> <li>2. Disconnects between NFIP Regulations and Insurance (1 day).</li> <li>3. Common Noncompliance Issues (½ day)</li> <li>4. Digital Flood Insurance Rate Maps (DFIRMs) (½ day).</li> <li>5. Substantial Improvement/Substantial Damage (1 day).</li> </ol> |
| March 26 – 29, 2018    | E0278 NFIP/Community Rating System   |
| March 26 – 29, 2018    | E0176 Hazus-MH for Floodplain Managers   |
| April 2 – 5, 2018      | E0190 ArcGIS for Emergency Managers  |
| April 30 – May 3, 2018 | E0212 HMA: Developing Quality Application Elements   |
| April 30 – May 3, 2018 | E0241 Cooperating Technical Partners: Special Topics   |
| May 7 – 10, 2018       | E0273 Managing Floodplain Development thru the NFIP  |
| May 14 – 17, 2018      | E0279 Retrofitting Floodprone Residential Buildings  |
| June 25 – 28, 2018     | E0278 NFIP/Community Rating System   |
| June 25 – 26, 2018     | E0213 HMA: Application Review and Evaluation   |
| June 27 – 28, 2018     | E0214 HMA: Project Implementation & Program Closeout   |
| July 9 – 12, 2018      | E0194 Advanced Floodplain Management Concepts <ol style="list-style-type: none"> <li>1. NFIP Floodplain Rules and Regulations in Depth (1 day).</li> <li>2. LOMC - Procedures for Applying and FPM Implications (1 day).</li> <li>3. Roles and Responsibilities of the Local Floodplain Manager (1 day).</li> <li>4. Preparing for Post-Disaster Responsibilities (1day).</li> </ol>       |
| July 30 – Aug. 2, 2018 | E0282 Advanced Floodplain Management Concepts II <ol style="list-style-type: none"> <li>1. Higher Standards in Floodplain Management (1 day).</li> <li>2. Manufactured Homes and RV's in the Floodplain (1 day).</li> <li>3. NFIP Flood Insurance Principles for the Floodplain Manager (1 day).</li> <li>4. Hydrology and Hydraulics for the FPM (1day).</li> </ol>                       |
| Aug. 13 – 16, 2018     | E0386 Residential Coastal Construction   |
| Aug. 27 – 30, 2018     | E0273 Managing Floodplain Development thru the NFIP  |



MARCH 12-14, 2018

# HILTON HEAD

SONESTA RESORT  
WWW.SCAHM.ORG

The South Carolina Association for Hazard Mitigation (SCAHM) will host its annual conference at the Sonesta Resort in Hilton Head, SC. This call for abstracts seeks a broad range of professionals to discuss the numerous issues regarding hazard mitigation and making South Carolina more disaster resistant. The conference averages approximately 150 attendees each year. Anyone wishing to make a presentation must submit an abstract (one page maximum) describing the material to be presented along with a brief biography (one page maximum) and contact information (address, phone number and e-mail address). Presentation time will range from 25 to 50 minutes based on the number of abstracts accepted for the conference. Individuals or companies submitting more than one abstract should list them in order of preference. All selected presenters must register for the conference.

# CALL FOR ABSTRACTS

DEADLINE FOR  
ABSTRACTS:  
JANUARY 2ND, 2018

Suggested topics for presentations include, but are not limited to, the following:

- Floodplain mapping
- No Adverse Impact
- Mitigation success stories
- Hazard mitigation planning
- HAZUS
- Wind, earthquake, and flood design standards
- NFIP & floodplain management issues
- Multi-hazard mitigation projects
- Coastal issues
- Tornado safe rooms
- Earthquake, wind and flood retrofitting projects
- FEMA mitigation grant programs
- Stormwater programs & funding
- Community Rating System
- Low Impact Development
- Wildfire mitigation
- Stream channel/Wetlands restoration
- Dam safety

Please submit your abstracts to Daryle Fontenot at [daryle.fontenot@aecom.com](mailto:daryle.fontenot@aecom.com). If you have any questions, you may contact Daryle Fontenot, SCAHM Executive Director, at the email address above or by phone at (704) 499-4506.

## 2018 Conferences & Events

The NCAFPM helps to advertise other floodplain management-related conferences and events but we do not have any involvement in planning these events, nor do we handle registration. Please see individual announcements for details. Dates and links are also located on the back page of this newsletter.

The NC Water Resources Research Institute (WRRI) will hold its 20<sup>th</sup> annual conference March 14-15, 2018, at the Jane S. McKimmon Center in Raleigh.

For 20 years, the WRRI Annual Conference has been the premier conference highlighting diverse topics in water research, management and policy in North Carolina. The conference features oral and poster presentations, themed panel discussions, ample networking opportunities, and hands-on interactive sessions for more in-depth discussions and problem solving related to water resources.

Registration will open and a detailed agenda will be available in January 2018. For more information, go to [go.ncsu.edu/wrriac](http://go.ncsu.edu/wrriac).



**March 14-15, 2018**  
**Raleigh, NC**

Report from the 2017 Conference: The 12<sup>th</sup> Annual Regional Stormwater Conference was held in Louisville, Kentucky on October 11-13, 2017. This year's event focused on Stormwater Solutions in Region 4 and provided attendees with a wide array of technologies and strategies to address challenges in stormwater management across the southeast. Attendees were eligible for up to 15.75 continuing education credits. Check their website for other upcoming events: [seswa.org](http://seswa.org)



**October 3-5, 2018**  
**Hilton Head, SC**

The North Carolina Aquaculture Development Conference will be March 7-10, 2018, at the New Bern Riverfront Convention Center. This conference is designed to bring together the general public, current and prospective fish farmers, scientists, and personnel from regulatory agencies to share information and ideas about the development of aquaculture in North Carolina. Attendees will learn about several topics relevant to aquaculture species in North Carolina, and find out about the latest aquaculture equipment and products by browsing the ongoing trade show. The famous Aquafoods Festival is an "all you care to eat..." gathering to close out Friday's activities, and targeted workshops will wrap up the conference on Saturday morning. For more information, and for registration, please go to their website at [ncaquaculture.org](http://ncaquaculture.org).



**March 7-10, 2018**  
**New Bern, NC**

NC State University Stream Restoration Program sponsors this biennial conference. With preserving, enhancing, and restoring the entire riparian ecosystem in mind, EcoStream is the preeminent conference that focuses on stream restoration for the southeast region of the US. This well-attended event facilitates discussions among restoration practitioners, managers and scientists towards advancing ecological restoration to better achieve functional inter-connectedness of wetlands, streams, hydrology, riparian corridors and the biologic communities they support. For more information, [click here](#).



**August 13-16, 2018**  
**Asheville, NC**

# Calendar

DETAILS FOR MANY OF THE CONFERENCES listed below are available throughout this newsletter for NCAFPM events and on page 27 for other conferences and events.

**March 7-10, 2018**  
NC AQUACULTURE DEVELOPMENT CONFERENCE  
Hilton Head, SC  
[ncaquaculture.org](http://ncaquaculture.org)

**March 12-14, 2018**  
SCAHM ANNUAL CONFERENCE  
Hilton Head, SC  
[scahm.org](http://scahm.org)

**March 14-15, 2018**  
NC WATER RESOURCES RESEARCH INSTITUTE  
20<sup>TH</sup> ANNUAL CONFERENCE  
Raleigh, NC  
[go.ncsu.edu/wriiac](http://go.ncsu.edu/wriiac)

**April 15-18, 2018**  
NCAFPM 29<sup>TH</sup> ANNUAL SPRING CONFERENCE  
Wilmington, NC  
[ncafp.org](http://ncafp.org)

**August 13-16, 2018**  
ECOSTREAM: STREAM ECOLOGY & RESTORATION CONFERENCE  
Asheville, NC  
[bae.ncsu.edu](http://bae.ncsu.edu)

**October 3-5, 2018**  
SESWA ANNUAL CONFERENCE  
Hilton Head, SC  
[seswa.org](http://seswa.org)

# Floodplain Management

# Resources

updated fall 2017

## Technical Assistance (State)

### NC Emergency Management National Flood Insurance Program

**NFIP State Coordinator:** Dan Brubaker, PE, CFM  
[dan.brubaker@ncdps.gov](mailto:dan.brubaker@ncdps.gov) | 919-825-2300

#### NFIP Planners

**Central Area:** Milton Carpenter, CFM  
[milton.carpenter@ncdps.gov](mailto:milton.carpenter@ncdps.gov) | 919-825-2302

**Eastern Branch:** Heather Keefer, CFM  
[heather.keeper@ncdps.gov](mailto:heather.keeper@ncdps.gov) | 919-825-2289

**Western Branch:** Terry Foxx, CFM  
[terry.foxx@ncdps.gov](mailto:terry.foxx@ncdps.gov) | 828-228-8526

### NC CLOMR/LOMR Submittals

[www.ncfloodmaps.com/mt-2\\_forms.htm](http://www.ncfloodmaps.com/mt-2_forms.htm)

**LOMC Manager/Community Development Planner:** Steve Garrett, CFM  
[steve.garrett@ncdps.gov](mailto:steve.garrett@ncdps.gov) | 919-825-2316

## Maps & Flood Insurance Studies

### FEMA Map Information eXchange (FMIX)

1-877-336-2627 (1-877-FEMA-MAP)

### Mecklenburg County CLOMR/LOMR Submittals

Technical assistance, LOMA/LOMR Requests  
877-336-2627 (877-FEMA-MAP) (toll free)

### NC Floodplain Mapping Program

919-715-5711  
[www.ncfloodmaps.com](http://www.ncfloodmaps.com)  
[flood.nc.gov](http://flood.nc.gov) (coming soon!)

**Program Manager:** Tonda Shelton, CFM  
[tonda.shelton@ncdps.gov](mailto:tonda.shelton@ncdps.gov) | 919-825-2345

**Outreach Coordinator:** Randy Mundt, AICP, CFM  
[randy.mundt@ncdps.gov](mailto:randy.mundt@ncdps.gov) | 919-825-2339

**Community Development Planner II:** Stacey Fuller Bobbitt, CFM  
[stacey.bobbitt@ncdps.gov](mailto:stacey.bobbitt@ncdps.gov) | 919-825-2315

## Technical Assistance (FEMA)

### National Flood Insurance Program Floodplain Management and Insurance Branch: FEMA Region IV

[fema.gov/region-iv-al-fl-ga-ky-ms-nc-sc-tn](http://fema.gov/region-iv-al-fl-ga-ky-ms-nc-sc-tn)

**Branch Chief:** Susan Wilson, CFM  
[susan.wilson@dhs.gov](mailto:susan.wilson@dhs.gov) | 770-220-5414

**Natural Hazards Program Specialist** Roy McClure, CFM  
[roy.mcclure@fema.dhs.gov](mailto:roy.mcclure@fema.dhs.gov) | 770-220-8835

**FEMA Region IV Insurance Specialist** Janice Mitchell  
[janice.mitchell@dhs.gov](mailto:janice.mitchell@dhs.gov) | 770-220-5441

### Individual Lot LOMA/LOMR

FEMA LOMA DEPOT  
3601 Eisenhower Avenue  
Alexandria, VA 22304-6425  
Attn: LOMA Manager

### Flood Insurance Policy Issues

**Regional Manager:** Janice Mitchell  
[janice.mitchell@dhs.gov](mailto:janice.mitchell@dhs.gov) | 770-220-5441

**Regional Liaison:** David Clukie, CFM  
[dclukie@ostglobal.com](mailto:dclukie@ostglobal.com) | 770-893-1480

## Websites

NCAFPM.....[ncafp.org](http://ncafp.org)  
ASFPM .....[floods.org](http://floods.org)  
FEMA.....[fema.gov](http://fema.gov)  
NFIP.....[floodsmart.gov](http://floodsmart.gov)  
NCEM .....[ncdps.gov/Our-Organization/Emergency-Management](http://ncdps.gov/Our-Organization/Emergency-Management)  
NC Maps ..... [ncfloodmaps.com](http://ncfloodmaps.com)  
& coming soon! ..... [flood.nc.gov](http://flood.nc.gov)  
FRIS.....[fris.nc.gov/fris](http://fris.nc.gov/fris)  
FIMAN ..... [fiman.nc.gov/fiman](http://fiman.nc.gov/fiman)

**FlashFlood NEWS** is a semi-annual online publication which offers information and education on topics that are of current interest in the field of floodplain management and the National Flood Insurance Program.

Information and opinions do not necessarily reflect the views of the North Carolina Association of Floodplain Managers.

All inquiries and article ideas should be directed to Kelly Keesling at [kgkeesling@carolina.rr.com](mailto:kgkeesling@carolina.rr.com).

For more information about the North Carolina Association of Floodplain Managers, see our website at [ncafp.org](http://ncafp.org).

### SPONSORS

For information on sponsoring **FlashFlood NEWS**, see our Media Kit on the NCAFPM website at [ncafp.org/FlashFlood](http://ncafp.org/FlashFlood).

### MEMBERSHIP

For more information about becoming a member of NCAFPM or for a membership application, go to [ncafp.org/membership](http://ncafp.org/membership).

# FlashFlood NEWS

**FlashFlood NEWS**, Fall 2017 (2017 #2).  
Published by the North Carolina Association of Floodplain Managers in cooperation with the North Carolina Division of Emergency Management.

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