

(click on text to go directly to the page)

What's Inside

From the Chairman ...	2
North Carolina Counties' Participation in the Community Rating System of NFIP	3
Flood Hazard Communication	4
Board of Directors	6
Engineering Factors Contributing to the Floodplain Changes in Mecklenburg County .	7
CFM Corner	8
NCAFFPM 2012 Annual Conference	8
A Fundamental Change in Managing Our Community Water Infrastructure	9
Regional Reports	10
Conferences	13
Education/Training..	14
Resources	16

Thank you to our Sponsors:

AECOM	5
ESP	8
Dewberry.....	9
Zero Flood Barrier	12



Fall Floodplain Institute

NORTH CAROLINA ASSOCIATION OF FLOODPLAIN MANAGERS

In 2005, the NCAFFPM Board of Directors approved the concept of a second annual conference for our organization. This decision was made in part from feedback from members for conferences in their locale and also with a cognizance of weather patterns. After experiencing April snow in Boone, a decision was made to provide the Annual Spring Conference at a location in eastern North Carolina and the Fall Floodplain Institute in the central or western portion of North Carolina.

The first Fall Floodplain Institute was held in 2006 in Greensboro. While the subject matter, training, and CEU's were well received, the venue and ease of travel for some members remained an issue. In addition, it was noted that many training opportunities regularly took place around the Raleigh area which resulted in a "watered" down conference for our organization in terms of participants.

Subsequent Fall Floodplain Institutes have been scheduled between Boone (2008 & 2011) and Asheville (2007 & 2009). Last year's 2010 FFI, our 5th, was successfully held in Cherokee giving us yet another location to keep our institutes fresh, viable, and convenient.

The concept of the FFI has evolved into a more compact professional training opportunity. We also strive to keep things pertinent and personal with the recognition that networking and sharing experiences is an exceptional learning tool.



**NCAFFPM Fall
Floodplain Institute**

**Oct. 12-14, 2011
Boone, NC**



As in all things your Board undertakes, your feedback and participation are critical if we are to continue to meet your needs for the changing roles of floodplain management. Hope to see you in Boone! ▲

From the Chairman's Desk



ROBERT BILLINGS, PE, CFM
NCAFPM CHAIRMAN

Once in a while, it is good for any organization to look inward and review accomplishments, failures and opportunities for improvement. Many private companies and government agencies will from time to time hold retreats or business meetings to discuss “how are we doing” with the employees and associates. At the Fall Floodplain Institute in Boone, I would like to take time to discuss some of our accomplishments and opportunities for improvement during the plenary session. As I reflect on the past few years, I believe we have strengthened the association in several ways:

Liability Insurance. The association carries two policies: Specimen General Liability and General Liability. The Specimen General is a policy for our conferences and the General Liability covers the board officers. We are paying approximately \$1300 per year for the policies.

Certified Floodplain Manager. A person must be CFM in good standing to serve as a board member. I believe everyone that is associated with this organization can see the benefit in having a CFM.

Credit Cards. Yes, we have moved into the future! We are now accepting credit card payments (as you may have noticed with our registration for the Fall Floodplain Institute)! Susan Frady, our treasurer, and Kelly Keesling, our administrative assistant, worked on several different options and platforms to get us to where we are. This is a nice new feature and I’m really impressed by Susan’s and Kelly’s work on getting this together before the FFI.

File Transfer Protocol (ftp://). Another step into the future, for the FFI we are rolling out the NCAFPM’s new ftp site: <ftp://ftp.ncafp.org/>. We have had numerous requests over the years to include a method to make conference presentations available after the conference. I mentioned this to Shweta Chervu, PE, CFM with Dewberry and she said that she would be glad to work on getting our ftp site set up. Within a few months she had a working prototype. With a few additional tweaks and some organizational task the ftp was complete. I cannot thank Shweta enough for working on this project. The ftp site is set up with minimum security to allow all members to upload and download presentations. We’ll be giving out the passwords at the FFI. After the conference, send a request to me or Billy Merrill and we will gladly email you the password.

At the end of most “business” meetings there is time for forward planning. Where are we going next? Several interesting ideas have been floated – maybe they are just waiting on the next set of board officers to be voted in. Some ideas to consider:

- Web Site updates – we are in need of a web site overhaul.
- Term limits – Term limits for Board members have been suggested in the past, but it seems like new people are naturally coming in and old timers have been moving on in recent years.
- Joint Conferences – The NC/SC conference has always been a big success. We’ve been working on the idea of have a joint NC/TN conference in either Cherokee or Gatlinburg. The TN chapter is just getting started so the conference would require intensive planning in order to run as smoothly as NC/SC.
- Hosting a National Conference – the selection for the national ASFPM conference is five to six years in the future. This is a huge task. Although the paid ASFPM folks are responsible for most of the planning, the local chapter will be kept busy as well. Possible venues may be Charlotte, Raleigh, Wilmington, or possibly another team up with South Carolina in Myrtle Beach.

As you can see, the Association has been busy. New people coming into leadership roles in our association with new ideas and new energy are crucial to our continued growth. At our last board elections meeting when we were in Charleston with our SC friends, we had several people volunteer to serve on the board – without a lot of arm twisting! People wanting to serve on the board and people volunteering to help with projects is a testament to the strength and vitality of our organization. The NCAFPM is alive and healthy and the forecast is calling for sunshine ... or perhaps I should say rain. ☺

Robert Billings, PE, PH, CFM
Chair - NCAFPM

North Carolina Counties' Participation in the Community Rating System of NFIP

CRAIG E. LANDRY AND JINGYUAN LI, EAST CAROLINA UNIVERSITY

Flooding causes considerable loss to US communities and continues to be a major concern in local planning decisions. Regulations and land use control have greater impact on flood loss reduction than any other single floodplain management tool and have been widely used in United State. The National Flood Insurance Program (NFIP) provides federally-backed flood insurance to households and businesses in participating communities. In exchange, local governments must adopt specific floodplain management into building codes and zoning and subdivision regulations. In order to reduce flood loss through community-level mitigation projects, facilitate accurate insurance rating, and promote the public's awareness of flood hazard and insurance, the Community Rating System (CRS) of NFIP, credits 18 community floodplain management activities and awards premium discounts for flood insurance purchase.

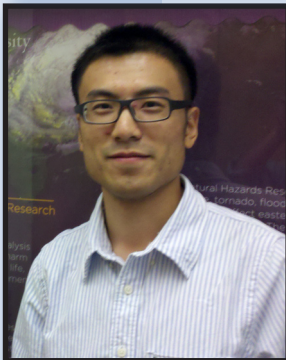
CRS, however, has been marked by a lack of active participation since its inception. As of January 2008, 1080 communities, represents only 5% of all the NFIP communities, had enrolled in CRS. Of the 469 NFIP communities in North Carolina, only 75 (slightly over 15%) actively participate in CRS. Little empirical evidence exists to shed light on what factors influence the local hazard mitigation activities. A recent project of Center for Natural Hazard Research (CNHR) and RENCI@ECU seeks to provide such evidence through an examination of patterns in CRS participation in 100 North Carolina counties from 1991 to 2002. This project examines the influence of flood experience, hydrological risk, local capacity, and socioeconomic factors on county hazard mitigation decisions.

The results indicate that historical flooding experience and physical risk factors have significant influence on voluntary local hazard mitigation activities. Those counties that have experienced a greater number of flooding events and greater property damage in the previous five years are more likely to participate in CRS. Those counties with a larger proportion of water bodies (as a percentage of land area) and greater average annual precipitation are more likely to participate. These findings are encourages, as they suggest that those at greater risk are more likely to engage in flood hazard mitigation. Surprisingly, CAMA counties are less likely to participate in CRS (all else being equal).

Not surprisingly, our findings imply that flood hazard mitigation is more likely to occur in wealthier districts with greater tax revenue and that poorer districts with less financial capacity may be more vulnerable to flood hazard. We find evidence suggesting that the proportion of senior citizens within a county has a negative influence on the likelihood of CRS participation. We speculate that this may reflect recent retiree migration patterns in North Carolina.

Lastly, our results indicate that flood hazard mitigation activities at the county level are more likely when a greater number of nested of municipalities participate. We interpret this finding as indicative of spillover and agglomeration effects associated with hazard analysis & mitigation equipment and expertise.

These research results contribute to a better understanding of community decision making under natural hazard risk and help to assess vulnerability by providing information on mitigation decisions. Through an improved understanding of factors that motivate hazard mitigation, state governments and FEMA can better encourage participation in the CRS and similar voluntary, incentive-based programs in order to provide for better protection from flood hazards. ▲



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Flood Hazard Communication: Looking at Ourselves in the Mirror

TIM TRAUTMAN, P.E., CFM, ASFPM MITIGATION POD COORDINATOR

Flooding has certainly been in the news this year with the Mississippi and Missouri Rivers rising for months on end. Last year in 2010, massive flooding in Tennessee and Rhode Island made headlines, along with a barrage of media and political scrutiny as a result of new Flood Insurance Rate Maps becoming effective in several riverine and coastal communities and behind non-accredited levees. In 2009, flooding along the Red River and elsewhere got substantial media coverage. It seems each year there's some level of catastrophic flooding that gains national attention. Floods offer many "teaching moments" for us to promote wise floodplain management and demonstrate the benefits of taking actions that reduce risk to life and property. However, we should also ask ourselves what we're "teaching" the remaining 300 plus days of the year when floods are not newsworthy. What image are we reflecting in the mirror each day that shapes common views about flood risk throughout the country? I'm convinced the Flood Insurance Rate Maps (FIRMs), within the context of the National Flood Insurance Program (NFIP), have educated much of our nation the past 40 years.

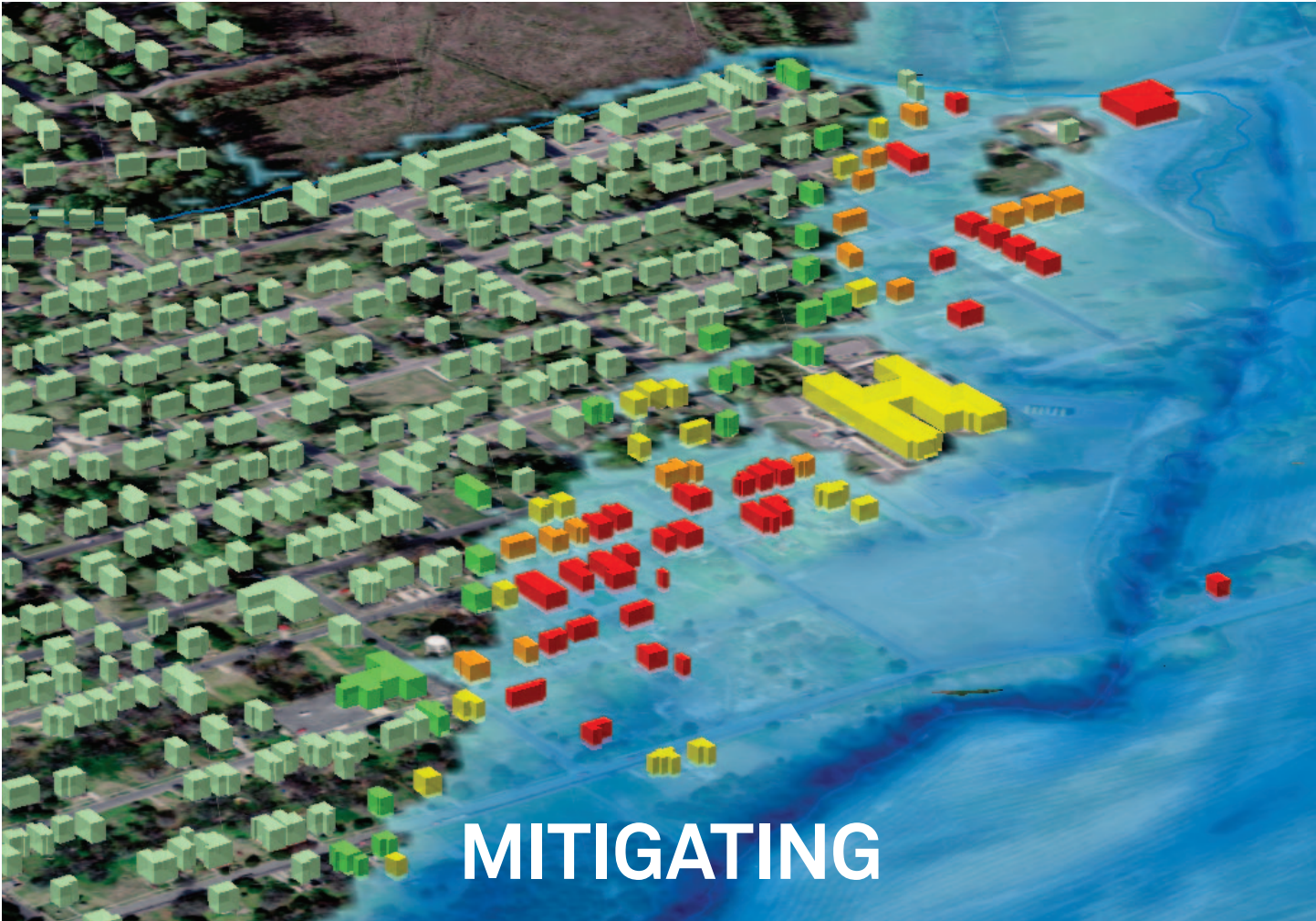
FIRMs have served a vital purpose since the inception of the NFIP. They've allowed flood insurance to be widely available and laid the foundation for regulating development around rivers, streams, and coastlines. But these maps were developed and are maintained under the premise of flood insurance determinations and for rating policies. We've used them for flood hazard communication and education out of necessity. Although technology has evolved substantially since the initiation of the NFIP, the insurance based fundamentals of the program have not changed. Therefore, the FIRMs have become the national source for flood hazard information and for educating the public about flood risk.

Imagine that we are the head chef needing to feed the nation with flood information. For the past 40 years, we've been baking only one type of cake. Sometimes we vary the ingredients, alter how precisely we measure each one, and produce cakes at varying costs. For many years everyone was happy and healthy consuming our flood insurance products. But a strong case can be made that the cakes we've created have slowly poisoned our efforts to increase public awareness and understanding of flood risk. The NFIP requires that we keep making the same cakes even though we now know some of the ingredients are flawed, unhealthy, and have long term health impacts. This is in spite of advancements that now allow us to bake with healthier ingredients and only produce products that are more likely to lead to action that reduces risk to life and property – FEMA's vision for Risk MAP.

Consider the following messages we inherently convey to the nation through the NFIP and data published on Flood Insurance Rate Maps:

- All properties in the Floodplain have the same likelihood of flooding.
- You're either "in" the Floodplain (i.e. have risk), or you're "out" (i.e. no risk).
- There are only two levels of flood hazard (1% and 0.2% annual chance flood).
- Flooding is statistically rare within the entire Floodplain (only a 1% annual chance of flooding).
- Incentives geared toward getting "out" of the floodplain, not on actions that reduce risk.

From ASFPM *News & Views*,
August 2011



MITIGATING

MORE EFFECTIVELY

We are AECOM. Floods cause more damage than any other natural disaster. Our engineers, scientists, planners and GIS specialists provide solutions to mitigate the loss of life and property. We provide comprehensive services in flood hazard management to enhance community resilience, including GIS, floodplain mapping, risk assessment and mitigation, climate change analysis and coastal protection.

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Food for Thought, from page 4

- Insurance rates have no direct correlation to likelihood of flooding or varied risk.
- The FIRM is produced on a static map panel, implying that the Floodplain doesn't change over time.
- Many of us work hard to counteract this type of misinformation regarding flood risk and residual risk. At times we combat a wide range of misunderstanding which can be further propagated by the news media. At all levels of government, we battle many common misperceptions such as "I'm either in or out of a floodplain" or "I'm at risk of flooding or not" or "The new maps put me into a floodplain" or "The floodplain must be wrong because I've never flooded" or "I flooded last year and therefore I shouldn't flood for another 100 years." I'm sure there are many similar comments that you've heard over the years.

I believe success in changing behaviors that will reduce risk to life and property will only occur if we change the products we produce and reform the way they're used for flood insurance. FEMA's Risk MAP initiative is intended to address many of these core misperceptions and issues. So we are now baking new products. But we are also continuing to bake the same cake that has slowly poisoned the public perception of flood risk. As Dennis Mileti's research on human behavior concluded, we are creatures of "monkey see, monkey do." And as long as our residents continue to see the inherent messages conveyed by the insurance products we produce, they will continue to do things that inevitably increase the consequences of flooding and minimize the number of sustainable actions that protect lives and property.

The vast majority of people do understand the basic correlation between risk and the cost of insurance when it comes to homeowners, automobile, life, and health insurance. They see it, discuss it at the kitchen table, and generally understand it. Those rates are structured such that the greater the risk, the greater the cost of insurance. Most people realize a teenager driving a Porsche is a greater "risk" to insure than an experienced driver in an old Volvo sedan. Therefore auto insurance will cost substantially more.

So, imagine an environment where the FIRM as we know it does not exist. Imagine if we only produced products that demonstrated the varying and changing nature of flooding, and the associated consequences. Imagine if we only produced flood maps, assessments and plans which could be used for informed decision making. And imagine if flood insurance rates truly varied based on these hazard products and the predicted financial consequences? I believe it would ultimately change the way people think about flooding. Our products would be entirely consistent with our message. Risk based products integrated into daily public and private decision making would lead to discussions about the risk and cost of flooding, and would eventually foster changed behaviors.

Once all mapping products are produced under the paradigm of flood hazard and risk communication, we can expect behaviors of residents, government agencies, and elected officials to more holistically change. Our products will be consistent with our message and lead to continual "teaching moments." We'd be in a position to continually feed our population with a healthy dose of floodplain nutrition that would lead to a more sustainable and resilient nation. ▲

Engineering Factors Contributing to the Floodplain Changes in Mecklenburg County

AMIT SACHAN¹, PE, CFM, PROJECT MANAGER, DEWBERRY AND DAVIS INC.

ROBERT BILLINGS², PE, CFM, PROJECT MANAGER, CHARLOTTE-MECKLENBURG STORM WATER SERVICES

Upon completion of any floodplain analysis, the biggest challenge that community officials face is to inform and educate community stakeholders about the new floodplain maps. The most common questions asked by the general public, property owners, and developers alike, are regarding reasons for the changes in the floodplains. Using a grant from the FEMA for Risk MAP Early Demonstration Projects, Charlotte-Mecklenburg Storm Water Services tasked Dewberry to assist with development of the outreach tools to address this issue.

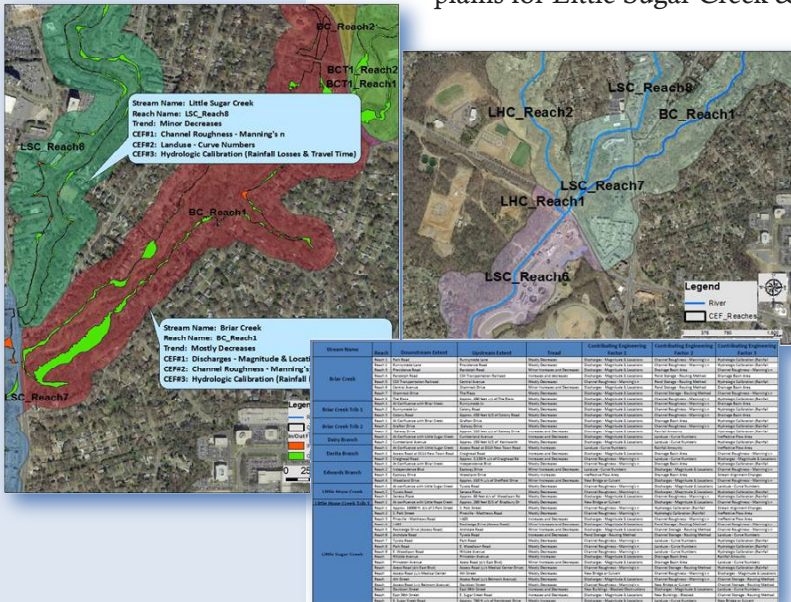
Dewberry identified Contributing Engineering Factors (CEF) for changes in the floodplains for Little Sugar Creek & Briar Creek subbasins. The CEFs were identified

based on the earlier hydrologic and hydraulic modeling and mapping process. Any engineering factor used in the modeling and mapping analyses, which may change the results (e.g. base flood elevation or floodplain width) was considered in the analysis. These engineering factors include model versions, routing methodology, input parameters, model calibration, and topographic data. While several of these factors cause a 'global' change over the subbasin, other factors cause 'site-specific' changes to the floodplain. For example, the newer model versions cause a change over the subbasin, the changes due to new bridge or channel roughness cause changes which are specific to the sites. The studied streams were divided into 'reaches' based on general 'trend' of the floodplain change in corresponding area. Each CEF was scored on the scale of -5 to

+5 based on the magnitude of the change. The stream reaches were then assigned with the top three (3) CEF.

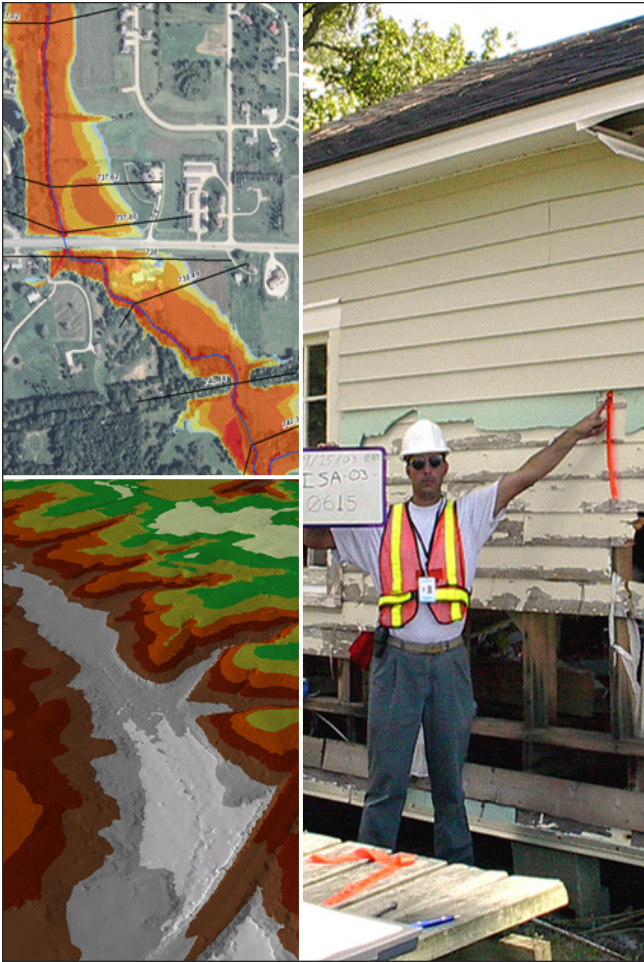
Another important goal of this project was to identify public outreach tools to communicate engineering factors responsible for the floodplain changes. These tools were designed to capitalize on the dense digital environment of data and web interface developed by the County Flood Mapping Program. Selected alternatives were then developed into demonstration tools. The paper-based and web-based digital demonstration tools were created to capture information regarding the engineering factors for all areas along the studied streams.

A presentation will be made in the upcoming NCAFPM Fall Institute in Oct 12-14, 2011 in Boone, NC. The authors will discuss challenges encountered, decision metrics, techniques utilized and lessons learned during the project. ▲



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CFM® New CFM Prep Corner Guide Available

The Exam Work group recently met in Madison to work on updates to the CFM exam. The new exam will be used starting January 1, 2012. The group also updated the exam preparation guide. This guide is now available on the CFM page of the NCAFPM website (www.ncafpm.org/cfm.htm).

Keep us updated

Notify Anita at cfm@floods.org if you move. CFM renewals and other certification related mailed material is sent to your HOME ADDRESS. Also, make sure we always have your current employment information with correct email address. ▲



Atlantic Beach, NC
May 2-4, 2012
Sheraton Atlantic Beach
Oceanfront Hotel

NCAFPM's 2012 Annual Conference will return to Atlantic Beach in 2012. The newly refurbished Sheraton is re-opening January 1st after storm damage from Hurricane Irene. Rooms are \$139 for our event and the Sheraton has opened up an online reservation website specifically for our conference:

www.starwoodmeeting.com/StarGroupsWeb/res?id=1110058205&key=81E89

WRRRI Seminar
Friday, October 14
10–11:30am
Junior League of
Raleigh Headquarters
and Center for
Community
Leadership
(711 Hillsborough
Street, Raleigh, NC
27603).

A Fundamental Change in Managing Our Community Water Infrastructure

Duke-UNC-WRRRI Water Allocation Research Seminar Series

In recent years many experts and practitioners have come to the conclusion that we must fundamentally change the way we conduct business with regard to our water, wastewater and stormwater infrastructure and operations if we are to successfully overcome the many challenges that our communities are facing or will likely face in this 21st Century. Some of the greater challenges include aging infrastructure and the gap in our financial resources to maintain properly or replace it, increases in impaired waters in our communities that drive regulatory responses, impacts of changing patterns in drought and wet weather, the need to reduce energy consumption for water-related infrastructure and more. Join us as Mr. Trevor Clements discusses research on defining a new paradigm

for water management sponsored by the Water Environment Research Foundation and the Electric Power Research Institute.

Registration is not required, but an email RSVP to water_resources@ncsu.edu is appreciated. ▲

Mr. Trevor Clements, MEM, is the National Watershed Management Practice Leader and Water Resources Director of the Research Triangle Park office for Tetra Tech. He received his Masters in Water Resources Systems Analysis from Duke in 1983 and has over 28 years of experience in watershed assessment, watershed management, source water protection, and management of stormwater and wastewater infrastructure. His focus is on integrated resource management. Mr. Clements was the Principal Investigator for the EPRI and WERF co-sponsored research on Case Studies for a New Paradigm for Water Infrastructure Management (2010). He was the Principal Investigator for the WERF project, Framework for a Watershed Management Program (1996) and a principal co-author of the EPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters (2008). Prior to beginning his consulting career in 1993, Mr. Clements worked 10 years with the North Carolina Division of Environmental Management where he rose to a Branch Chief with oversight of water quality modeling, NPDES Wasteload Allocation, TMDL and pretreatment programs.



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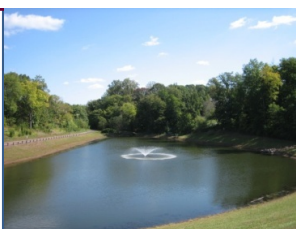
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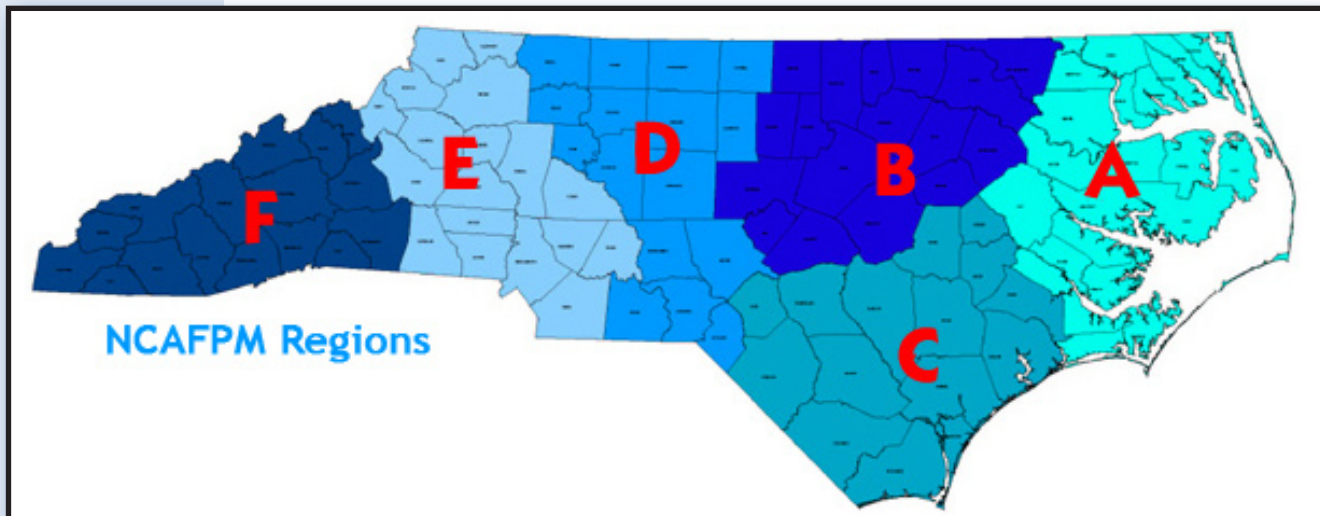
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NCAFPM Regional Reports



Region D

*Drew Blackwell,
CFM*

**Join the new
Region D
discussion
group on
LinkedIn®!**

We are currently working on a pilot project that will reinforce some of the fundamental principles the NCAFPM is dedicated to — specifically, ‘enhancing cooperation and exchange of information among various related private organizations; individuals; and local, state, and federal agencies’. To facilitate and encourage on-going discussions among members, a sub-group to the NCAFPM group on LinkedIn® has been created, Region D – NCAFPM. This sub-group serves as a medium for like professionals to share their opinions, tools and background of a variety of floodplain management practices. The primary purpose for focusing on Regional groups is to specify the different types of flooding concerns and issues associated in each region and how neighboring floodplain managers are applying their practices, but general questions and discussions are equally encouraged. All users can learn from discussions made within the group and it is open to all general members. A similar discussion space is currently being set-up on the existing UNC Listserv resource, so more to come on that. We will evaluate the utilization and effectiveness of both of these on-line discussion areas and decide if it would be beneficial to all chapter regions. Until then, feel free to open up a topic for discussion!

Region E

Karl Dauber, CFM

More than 70 buildings in the City of Charlotte were damaged in the flooding caused by the August 5, 2011 storm, the worst in Charlotte-Mecklenburg in nearly three years. Floodwater entered more than 68 structures. About one-third of those buildings had floodwater in the basement or crawl space. An additional 42 structures had floodwater in the living space. Water in the living space was up to 50 inches deep. 19 families were helped at the Red Cross’ emergency shelter at Northwest School of the Arts. Two deaths in rain-swollen Irvins Creek, a tributary of McAlpine Creek in southeast Charlotte. The heaviest rainfall was at Brookshire Boulevard and Beatties Ford Road where 6.83” of rain fell in about four hours on Friday. See the [Charlotte-Mecklenburg rainfall map](#).

“Friday’s flooding took a lot of people by surprise. Dozens of lives were saved due to successful evacuation and rescue efforts,” said Capt. Rob Brisley of the Charlotte Fire Department. “However, many people did suffer losses. Our community is pulling together to help those who suffered in the flooding.”

“More than 100 properties flooded again on Friday but did not have damage,” noted

— continued on next page

Region F

*Brad L. Burton,
CFM*

Dave Canaan of Charlotte-Mecklenburg Storm Water Services. “Homes and businesses in those flood-prone locations were bought through Storm Water’s [Floodplain Buyout Program](#).” Begun in 2000, the ongoing program has bought and torn down more than 230 high-risk properties. The land is returned to open space which is not damaged when it floods.

“He’s a good boy, sometimes he’s just a little slow ...”

So I get an Email from Kelly recently reminding me that “Regional Reports” for the FlashFlood newsletter are due. I stare at the email like a calf looking a new gate and after a while I said to myself, “Self — have you — in the year plus since you’ve been the Region F representative for the Association, ever written a regional report for the Flash Flood Newsletter?”

Uh...no, I haven’t. My, what a Slacker I have been!

Is it possible that I have been disregarding Kelly’s pleas for reports ‘cause I’m too reserved and shy to write an article about my region? Those of you acquainted with me already know that surely can’t be the reason why.

The cloud of guilt envelopes me even further...what I have I done in the past year plus to get to know the folks in my region?

Hmmmm ... nothing really. Gee whiz Brad, what kind of regional representative are you?

I would offer I’m just like you, dear reader—way busy at my assigned job plus doing more “other job duties as may be required” for my employer in this challenging economy. We all are; and these conditions aren’t going to change for a while, it seems.

We must stay focused when doing all of our assigned jobs, and we need to remain especially diligent in our role as floodplain administrators.

Here’s a personal example of something small that could potentially be something big: Our Public Works guys brought me a plan to review about a month ago indicating the route they wanted to take through one of our floodplains with a replacement sewer line. I focused at an area where they were proposing to work abutting a floodway at a bridge (that currently employs a culvert about the size of a Dixie Cup®). I expressed my concerns about the placement of spoil and equipment and passed it on.

Two days later while slurping coffee and coveting a steak biscuit, I glanced at the plans that were still open on the side of my desk (if you have ever seen my office this would not come as a surprise). Well, as Gomer would say, “Shazam!” The highly efficient surveyor that had done the locating work for the project also was kind enough to locate not one, but two, jumbo propane tanks behind homes on the sewer route— both well into the floodway. Are they adequately anchored to prevent flotation, collapse, and lateral movement? Why are they located there anyway?

I don’t know, ‘cause I haven’t gotten down there yet. I’m so busy...

Does this sound familiar?

But now that I’ve published this info, you’d better believe that I will. I’ll also be a little more diligent in the depth of my plan review next time.

I’ll be at the Fall Floodplain Institute in Boone. Region F folks (and anyone else, of course), please come by the table and let’s shake hands!



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FloodBarrierForDoors.com

Flood Barrier Shield for Doors Helps Safeguard Building Contents

This removable barrier answers pleas from builders for help in protecting doors and building contents from water ingress in flood-prone areas. When water from heavy rains accumulates, the **#2070 Flood Barrier Shield** effectively blocks water from permeating door openings.

Available in 10, 20, 24, 30 and 36 inch high barriers (other sizes available upon request), the lightweight aluminum shield requires no tools or muscle strength for insertion into premounted vertical channels attached to either the door frame or adjacent walls.

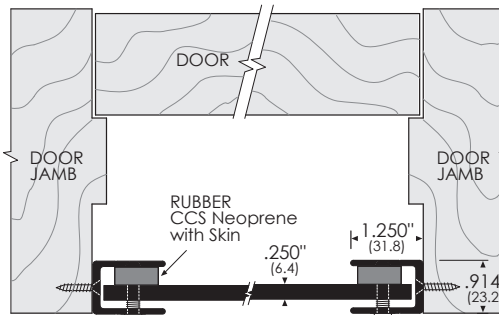
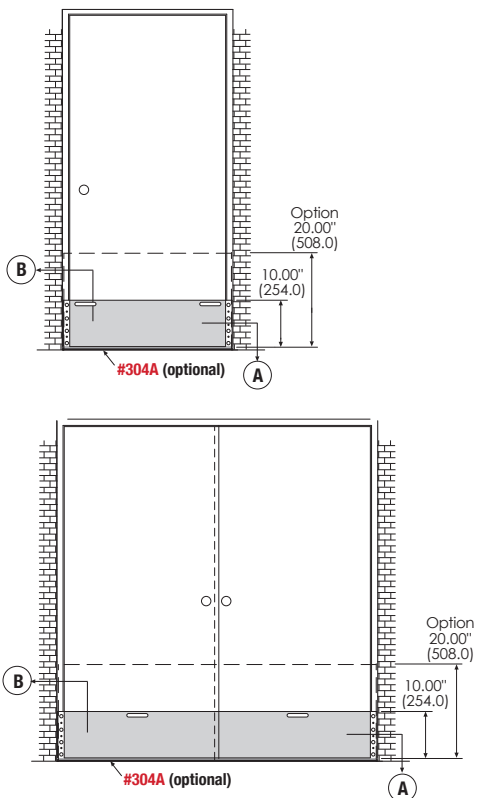
The unit complies with guidelines of the Federal Emergency Management Agency (FEMA) and Federal Insurance Administration (FIA) for use on doors in flood-prone areas.

The key to the shield's impermeability is the use of closed cell sponge (CCS) neoprene rubber engineered by Zero to ensure a water-tight seal. The rubber lines the aluminum channel brackets and the bottom of the shield. The neoprene also compensates for gaps at the threshold.

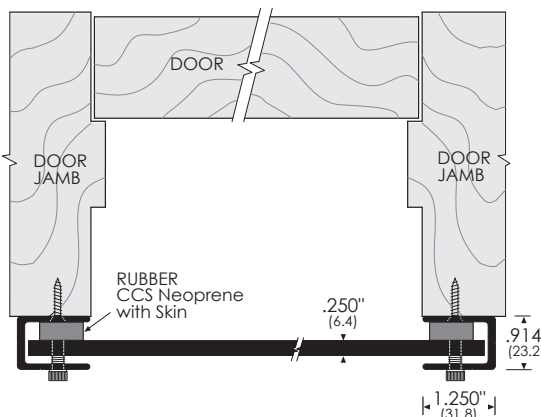


- Part# 2070A - 10 10" High**
- 2070A - 20 20" High**
- 2070A - 24 24" High**
- 2070A - 30 30" High**
- 2070A - 36 36" High**

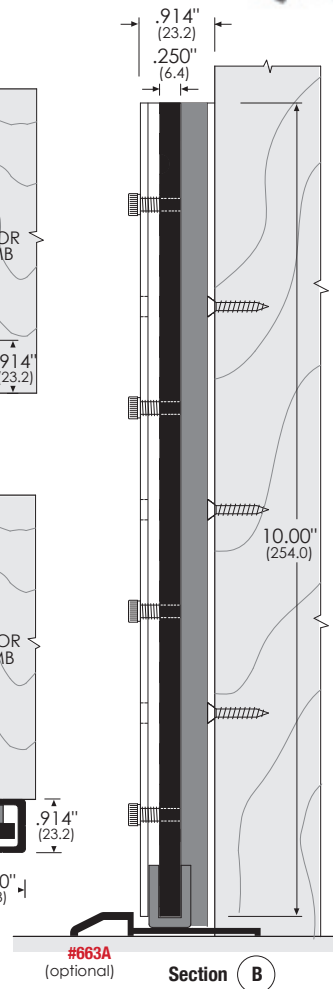
Each Flood Barrier Shield is custom fabricated
 Specify exact width needed and installation option required.



Section A Installation option 1 - INSIDE MOUNT



Section A Installation option 2 - OUTSIDE MOUNT



Section B

Full illustrations not to scale

Conferences & Annual Meetings



May 20-25, 2012
San Antonio, TX

www.floods.org

ASFPM 2012 Annual National Conference

The Association of State Floodplain Managers will convene the world's largest and most comprehensive floodplain management conference – our 36th annual gathering – the week of May 20 - 25, 2012, in San Antonio, Texas. We invite you to share your experiences with local, state, and federal officials, industry leaders, consultants, and other interested parties by presenting a paper relevant to our theme, "Mission Mitigation".

Throughout the week, 200 of the industry's experts will conduct plenary and concurrent sessions and share the state-of-the-art in techniques, programs, and resources to accomplish flood mitigation, watershed management, and other community goals. A three-day comprehensive exposition features the materials, equipment, accessories, and services vital to get the job done. Supplementary technical field tours and training workshops provide in-depth training. Numerous networking activities offer additional opportunities to learn from each other. Hotel reservations are now available at the San Antonio Marriott Rivercenter.

Call for Presenters

October 31, 2011 is the deadline for all those wishing to submit a presentation for ASFPM 's Annual Conference to be held May 20-25 in San Antonio, Texas. More details are available on the 2012 Conference page at www.floods.org. Information will also be available at the NCAFPM Fall Floodplain Institute.



Nov. 28 - Dec. 1, 2011
Sacramento, CA

www.floods.org

National FloodProofing Conference V

Elevation? Wet floodproofing? Dry floodproofing? Buyout? Acquisition? Relocation? All of these nonstructural / floodproofing techniques, and the policies surrounding them, will be discussed at the 5th National Floodproofing Conference in Sacramento, California, November 28 – December 1, 2011. We will highlight the various floodproofing methods, products, techniques, programs, funding sources, and issues that have developed since the first four triennial conferences in 1999, 2002, and 2005, and 2008. Exhibitors will showcase the state-of-the-art in materials, services, equipment, accessories and techniques Tuesday through Wednesday. Poster displays will demonstrate what works (and doesn't!) in terms of project application. Wednesday will feature a tour of local nonstructural and floodproofing techniques, with return to networking in the Conference Exhibit Hall. Additional training workshops are offered on Monday. Plenty of time is planned for attendees to exchange ideas and view the exhibits, so opportunities to network will be ample, as they are at all ASFPM-sponsored conferences.. For more information, go to www.floods.org.

Education & Training



FEMA's Emergency Management Institute (EMI)

2011 - 2012 Continuing Education Opportunities

There are seats available for floodplain management courses at EMI that have been pre-approved for Continuing Education Credits (CECs) for CFMs.

EMI courses are offered at the Emmitsburg, MD campus and are FREE for local and state government employees to attend. FEMA reimburses travel expenses and provides housing for state and local government employees attending EMI courses. Attendees or their employers pay for the campus meal ticket (about \$100 per week).

You can find the EMI Course Schedule and application materials on the EMI website – <http://training.fema.gov/EMI/>.

 The logo for the Water Resources Research Institute (WRRI) is shown. It consists of the letters "WRRI" in a large, bold, blue, sans-serif font. Below the letters is a stylized blue wave graphic.

For more information about the Water Resources Research Institute (WRRI) of The University of North Carolina, go to www.ncsu.edu/wrri

Water System Auditing and Loss Control

Are you frustrated with utility expenses outpacing revenues? Are your utility customers upset that they are being asked to conserve, while perceiving they are paying for the system's inefficiencies? Best-practices for Water Auditing and Loss Control, as developed by the American Water Works Association, are beginning to take hold among water systems in the Southeast and across the nation. Water Auditing and Loss Control programs are the most effective ways for a utility to conserve water, save operating expenses, and increase revenues. The State of Georgia now requires Water Auditing from its public water utilities, and policymakers in Kentucky, Tennessee and Virginia are considering the Georgia model. In North Carolina over 30 systems have recently embraced these best-practices for Water Auditing and Loss Control, and the results are compelling.

Join us on October 10 for "Water System Auditing and Loss Control," where the operational, financial and regulatory perspectives come together to present the state of water efficiency in the industry, and where it goes from here. Presentations will include lessons learned from other NC utilities over the short-term, systems outside NC over the long-term, funding options for performing audits, and a look at the regulatory momentum in the Southeast. A demonstration on the AWWA Free Water Audit Software will also be included.

Who should attend? City Managers, Utility Managers, Distribution System Operators, Finance Officers, Billing and Customer Service Officers. The cost is \$45 at the door. Please register at www.ncsu.edu/wrri/events/water_audit/forum.html. 4.25 PDHs will be available (subject to board approval). Contact WRRI at water_resources@ncsu.edu or call 919-515-2815.

This workshop is sponsored by: SWIC (the State Water Infrastructure Commission), WRRI (the Water Resources Research Institute of the UNC System), Cavanaugh & Associates, Duke University's Nicholas Institute for Environmental Policy Solutions, NC League of Municipalities, the NC Association of County Commissioners, and the Carolinas Association of General Contractors.

Water System Auditing & Loss Control

Mon., Oct. 10
9:30-2:30
McKimmon Ctr
Raleigh NC

Education & Training (continued)

Erosion & Sedimentation Control Planning & Design

**October 25-26
Wilmington, NC**

**November 9-10
Hickory, NC**

Erosion & Sedimentation Control Planning and Design Workshops

These workshops are structured to educate and familiarize design professionals with the NC Sedimentation Pollution Control Act (SPCA), the rules implementing the Act, design standards for erosion and sedimentation control BMPs, and elements that are necessary to submit an erosion control plan. This comes to you directly from the source—the NC Division of Land Resources Land Quality Section and its partners providing you with the information you need to submit an erosion control plan and prevent pollution by sedimentation.

Registration Fee is \$175 and includes materials, breaks, field exercise and two lunches. For more information, including registration and exhibitor information, go to www.ncsu.edu/wrri/erosionworkshops.html. Questions? Contact WRRI at (919) 515-2815 or water_resources@ncsu.edu.

NFIP/CRS

Oct. 26-28

**8:30am–4:30 pm
(Wed & Thurs),
8am–12pm (Friday)**

**Pine Knoll
Shores, NC**

National Flood Insurance Program/ Community Rating System (NFIP/CRS)

Floods have caused a greater loss of life and property, and have devastated more families and communities in the United States than all other natural hazards combined. Since the National Flood Insurance Program (NFIP) was created by Congress in 1968, 551 North Carolina communities have voluntarily joined the program to reduce the loss of life and property from floods. Due to the devastation of storms across North Carolina and as North Carolina continues to release new digital Flood Insurance Rate Maps, many more communities have decided to join the NFIP and many of the NFIP communities have been trying to find better ways to protect their citizens.

This course covers the Community Rating System (CRS), a nationwide initiative of FEMA's National Flood Insurance Program. It describes activities eligible for credit under CRS, how a community applies, and how a community modifies an application to improve its classification.

The North Carolina Division of Emergency Management Training & Exercise Registration Management System (TERMS) will be utilized for course registration. Participants must set up an account in TERMS to register for this course. TERMS will allow NCEM to track course registration and participation, and will allow you to access training records and transcripts in the future. Go to <http://terms.ncem.org/TRS/firstTimeReg.do> to set up your account.

Registration is \$50 and includes lunch on Wednesday and Thursday, and snacks during breaks. Please bring your check or cash with you to the workshop. Checks are payable to the NC Association of Floodplain Managers (NCAFPM, Federal ID #56-1802736).

Current CFM attendees will receive twelve (12) Core Continuing Education Credits for successful completion of this course.

If you have any questions regarding this workshop, please contact John Gerber, P.E., CFM, State NFIP Coordinator at 919.715-5711 x 106 or jgerber@ncem.org.

Calendar

October 12-14, 2011
NCAFPM FALL FLOODPLAIN
INSTITUTE
Broyhill Inn
Boone, NC
www.ncafpm.org

May 2-4, 2012
NCAFPM ANNUAL
CONFERENCE
Sheraton Oceanfront Hotel
Atlantic Beach, NC
www.ncafpm.org

May 20-25, 2012
ASSOCIATION OF STATE
FLOODPLAIN MANAGERS
ANNUAL CONFERENCE
San Antonio, TX
www.floods.org

Nov. 28 – Dec, 1, 2011
NATIONAL FLOODPROOFING
CONFERENCE V
Sacramento, CA
www.floods.org

Floodplain Management

Technical Assistance (FEMA)

National Flood Insurance Program

FEMA Region IV
www.fema.gov/about/regions/regioniv/
Natural Hazards Program Specialist
Tim Russo, CFM
Timothy.Russo@dhs.gov | 770-220-5420

FEMA Region IV Insurance Specialist
Janice Mitchell
janice.mitchell@dhs.gov | 770-220-5441

Floodplain Management and Insurance Branch: FEMA Region IV

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

LOMA/LOMR/No-Rise

Mohammed Waliullah..... 770-220-5493

Individual Lot LOMA/LOMR

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

Flood Insurance Policy Issues

www.fema.gov/business/nfip/nfip_regions.shtm#4
Regional Manager: Lynne Magel
LMagel@ostglobal.com | 813-788-2624
Regional Liaison: David Clukie
DClukie@ostglobal.com | 813-767-5355

Websites

NCAFPM..... www.ncafpm.org
ASFPM www.floods.org
FEMA www.fema.gov
NFIP www.floodsmart.gov
NCEM www.nccrimecontrol.org/nfip
NC Maps www.ncfloodmaps.com

Resources

Technical Assistance (State)

NC Emergency Mgmt

National Flood Insurance Program
NFIP State Coordinator: John Gerber, PE, CFM
jgerber@ncem.org | 919-715-5711 x 106

NC CLOMR/LOMR Submittals

www.ncfloodmaps.com/mt-2_forms.htm
LOMC Manager/Community Development Planner: Steve Garrett, CFM
sgarrett@ncem.org | 919-715-5711 x118

Meck. Co. CLOMR/LOMR Submittals

David C. Love, PE, CFM..... 704-432-0006

NFIP Planners

Central Area: Milton Carpenter, CFM
mcarpenter@ncem.org | 919-715-5711 x103

Eastern Area: Maureen O'Shea, AICP, CFM
moshea@ncem.org | 252-565-3206

Western Area: Terry Foxx
tfoxx@ncem.org | 828-228-8526

NFIP Engineer: Dan Brubaker, PE, CFM
dbrubaker@ncem.org | 919-715-5711 x110

Hazard Mitigation Grant Program & Flood Mitigation Assistance Prog

Chris Crew, Mitigation Section Chief
919-715-8000 x277

Maps & Flood Insurance Studies

FEMA Map Information eXchange (FMIX)

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

NC Floodplain Mapping Program

919-715-5711
www.ncfloodmaps.com

FlashFlood NEWS is a semi-annual 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, Editor (kgkeesling@carolina.rr.com).

For more information about the North Carolina Association of Floodplain Managers, see our website at www.ncafpm.org.

SPONSORS

For information on sponsoring **FlashFlood NEWS**, see our Media Kit on the NCAFPM website at www.ncafpm.org.

MEMBERSHIP

For more information about becoming a member of NCAFPM or for a membership application, go to www.ncafpm.org.



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