North Carolina Association of Floodplain Managers

FlashFlood NEWS

2013 Issue 1 Spring 2013

What's Inside

NCAFPM ANNUAL CONFERENCE

Ask Me About... Floodplain Management

North Carolina Association of Floodplain Managers

2013 Annual Conference

Holiday Inn Wrightsville Beach

April 28 – May 1, 2013

The North Carolina Association of Floodplain Managers (NCAFPM) invites you to our 2013 Annual Conference and Exhibition to be held Sunday, April 28 through Wednesday, May 1 at the Holiday Inn Resort in Wrightsville Beach, North Carolina.

The conference will offer new programs and extra sessions. Presentations by **John Dorman, Spencer Rogers, Berry Williams,** and **Rich Ducker** will bring attendees up to date on key critical issues of insurance, CRS, building codes, mapping and state legislative issues.

For more information and to register, please go to our website www.ncafpm.org.

"Ask Me About..."

"Ask Me About..." is a new NCAFPM program to create fun and informal networking among conference attendees. See page 2 for more details.

HEC-RAS Training

In addition to our meetings and breakout sessions, we will offer a day of hands-on training in HEC-RAS. Pre-registration is required. See website for details.

CFM Exam

A Certified Floodplain Manager (CFM) Exam will be offered Wednesday, May 1. Application must be approved prior to taking the exam. Details: www.ncafpm.org/CFM.htm.

Exhibits

Exhibits will be open Monday and Tuesday. Information about exhibiting and sponsorship opportunities is available at www.ncafpm.org.

Golf Tournament

Start off the conference by catching up with friends. Our annual golf tournament will be held Sunday, April 28 at the City of Wilmington Municipal Golf Course. Lunch and registration begin at 11:30am, with a shotgun start at 12:15pm. Cost ($55) includes greens fee, cart, boxed lunch, and prizes. Questions? Contact John Fullerton at john.fullerton@wilmingtonnc.gov.

Register today at www.ncafpm.org.

From the Chairman's Desk

John Fullerton, CFM
NCAFPM Chairman

In just over a month, NCAFPM members, friends, and guests will gather at Wrightsville Beach for our Annual Conference. We are very fortunate to have access to many leaders who will present and share their ideas and themselves with us. **John Dorman, Spencer Rogers, and Berry Williams** are familiar faces who continue to work diligently for the people of North Carolina and to share their time with NCAFPM. New leaders to us, like **James Faison, III and Tim Connor** are ready to introduce themselves and their expertise at this conference.

In a larger sense, we are blessed with many leaders in our organization. Leadership is not a title or position but rather a mindset. It is a mindset that has a purpose, not just any purpose but a purpose to serve others. NCAFPM has a purpose to protect lives and property from flood specifically and hazards generally. Your Board has the responsibility to provide training, communication, and technical knowledge to the members so that the purpose of the organization can be fulfilled. Our conferences help to accomplish this task and our sponsors, program chairs, and conference chairs guarantee that the conferences occur.

Inherent in successful conferences is cooperation, connection, compassion, and communication – all attributes of leaders. Striving to work together, forming relationships, taking time to listen, and sharing understanding are all leadership considerations. Author and motivational speaker, John Maxwell put it more simply. He identified leaders as (1) **being humble**, never arrogant; (2) **doing something of value**, other-focused rather than self-focused; and (3) **taking time to relate**, listening to another's story and sharing your story.

Thank you to all who continue to lead in your workplace, community and society and thank you to the many leaders of NCAFPM.

(Thanks also to Tim Connor for sharing his leadership thoughts, some of which are paraphrased here)

Hope to see you in Wrightsville Beach and hope to "Ask you about..."

John

"Ask Me About..."

"Ask Me About..." is a new NCAFPM program that hopes to create fun and informal networking among conference attendees. When registering for the conference, please include a "personal interests item" — a topic that you enjoy talking about. For example:

- 'Ask me about ..due process in floodplain mapping'
- 'Ask me about ..my pet PIG!'
- 'Ask me about ..Maine'
- 'Ask me about ..7 Tipping Points That Saved the World'
- 'Ask me about ..Camping'

Your item will be printed on your name badge. During conference breaks, lunches, and networking sessions, attendees are encouraged to initiate conversation using the "Ask Me About..." items which will serve as conversation icebreakers.

If you need to add or change your "Ask Me About..." item, please contact kgkeesling@carolina.rr.com.

BAD NEWS • GOOD NEWS

The bad news is that one of our newest Board members, **Shweta Chervu**, has been transferred to Denver (as in Colorado). Shweta has served as the Association's secretary since last spring. In addition, she has used some of her many talents and hard work adding a ftp to our website, volunteering for various tasks, and keeping track of Association members and events.

The very good news is that, with the move, Shweta gets to join her husband who has been employed in Denver for a year. This will be a very opportune arrangement as they are expecting their first child later this year. Congratulations and best wishes, Shweta. You will be missed and we are glad to have had you with us. We look forward to our continued association.

Sea Bright, New Jersey – the day after the March 6, 2013 flood event. (Photo: Mel Evans)

Sustainability and Resiliency: Lessons to Be Learned from Sandy

Terri L. Turner, AICP, CFM, City of Augusta, Ga

With $50.5 billion dollar Sandy Relief Bill signed by the President in January, adding to the $9.7 billion dollar bill signed earlier in January to replenish the NFIP (which had received well over 100,00 claims related to Sandy by that point in time), 8.2 million people that were initially without power, over 130 deaths attributable to the event, tens of billions of dollars in property damages, and untold business, transportation, and economic disruption, the devastation handed out by the October 29, 2012 "superstorm" event - Hurricane Sandy - proves to be one of the costliest disasters in our nation's history. Organizations like the Association of State Floodplain Managers (ASFPM) encourage the affected communities and their leaders to "Don't Just Respond and Replace: Respond, Replace and Make Resilient!" and the mitigation experts at the Natural Hazard Mitigation Association (NHMA) charge our beleaguered communities' citizens to "Build Back Safer & Smarter".

It is evident by these important messages that everyone wants our nation's communities to be better protected from natural disasters both now, and in the future…

Promoting Sustainability and Resiliency

In the rush to rebuild, few stop to think about the inevitability of similar events devastating their lives again - events of similar or greater magnitude occurring again in the same area or region or, worse yet, the strong likelihood of being stricken by "other foreseeable natural hazards" according to the experts. Some say, "No way! We have had our once-in-a-lifetime event." Yet, that is exactly what has happened to communities like Sea Bright, New Jersey, who experienced flooding from a March 6, 2013, nor-easter that plagued the 400 (still left there out of the original 1,500) storm-weary residents and business owners in that community who had to, once again, "get out the candles and get the generators started". The Star-Ledger reported that the "50-mile an hour winds scattered protective sand that had been added to the beach as part of a replenishment project" and that "it looked like downtown Sea Bright had been swallowed up in a dust storm, as the air was filled with swirling sand", while at the same time floodwaters were rising and many feared that the "two days of wind, rain and snow could cause Sandy-scale damage (once again) in Sea Bright."

So the message in this article is a very important one:

> ***Every community official, every industry, and every citizen involved in the aftermath of Sandy bears some responsibility in "building back smarter and stronger" or "building back resiliently" – that is, building back with the goal in mind of reducing or eliminating future pain and suffering caused by catastrophic hazard events.***

"If we simply build it back in place, we are setting the stage for the next major, costly, disruptive, tragic disaster," Sam Medlock, Policy Counsel for ASFPM tells Joe Palca of NPR in an interview published Nov 4, 2012, only days after the monstrous Sandy made landfall in the Northeast.

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A resilient structure or a resilient community is one that is able to:

- Withstand (the disaster)
- Rebound (from adversity)
- Adapt (to ever changing needs or conditions – such as climate change)

Sea Bright, New Jersey after Sandy (Photos: John Miller, PE, CFM, CSM; Associate Water Resources Engineer; Princeton Hydro, LLC)

So, how do those affected by Sandy (or others with the potential of Sandy-like events) do that?

The Path Forward

Now is the time to prepare for the storm of greater and higher magnitude. This is a "whole community" process – a process that "leverages all of the resources of the collective team in preparing for, protecting against, responding to, recovering from, and mitigating against all hazards" and which includes "meeting the needs of the entire community in each of these areas". This involves all of the stakeholders in and surrounding the community and includes "federal, state, territorial, local and tribal partners, non-governmental organizations like faith-based and non-profit groups, private sector industry, businesses, groups, families and individuals". "Engaging the whole community and empowering local action will better position stakeholders to plan for and meet the actual needs of a community and strengthen the local capacity to deal with the consequences of all threats and hazards." (Fema.gov)

Community preparation for the storm of greater and higher magnitude can be achieved through processes such as writing and adopting higher community standards (strong Stormwater Regulations and Flood Damage Prevention Ordinances), community participation in the Community Rating System (CRS), participating in community Mitigation Plans, incorporating hazards into the overall community planning process, and incorporating Best Practices, such as No Adverse Impact (NAI) Floodplain Management into the community's framework.

Truly enhancing our communities' resilience to natural hazards will not be an overnight process, nor will it be easy. We are talking about a wholesale change in how our nation, and its communities, deal with disasters – going from just responding to and recovering from tragic events, to actually planning for their arrival. This shift in philosophy, however, is paramount to keeping communities and those that live there safe, not only now, but more importantly, in the future, when we can better arm ourselves and fortify against the inevitable.

At the end of the day, the ultimate goal is actually quite straightforward – It is to reducing the human misery and suffering, or, perhaps, better put, the loss of life and property, caused by future hazard events on the citizens of this great nation.

Terri L Turner, AICP, CFM, the Development Administrator for the City of Augusta, Georgia is no stranger to disaster. In fact, she knows all too well the devastating impacts of flood damages – the human and physical toll it takes on a community. That's why she works tirelessly to ease the misery and human suffering for residents of her community, by engaging in a robust Flood Buyout Program, participating in the City's Sustainability Initiatives, and leading the community's participation in the Resilient Neighbors Network (RNN). Terri is currently the Region IV Director and the No Adverse Impact (NAI) Committee Co-Chair for the Association of State Floodplain Managers (ASFPM). In her "spare time", Terri travels around the nation speaking on No Adverse Impact (NAI) Floodplain Management, Climate Change Adaptation, Hazard Mitigation, and sound Floodplain Management.

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Floodproofing
Non-Residential Buildings
Safety, cost and liability in flood hazard areas

By Layne Evans, Smart Vent Products, Inc.
Excerpt reprinted by permission of Brian Shaw, SmartVent Products, Inc.

Almost everyone lives in a potential flood zone. In addition to the hurricanes and catastrophic floods that make national headlines, a damaging flood is happening somewhere in the U.S. every day, even in desert regions, caused by local heavy rainfall, dam failures, land development runoff, drainage problems, inland remnants of tropical storms and many other conditions. Nationwide, flooding is the leading cause of deaths related to severe weather, and it wipes out businesses, too. According to the National Flood Insurance Program (NFIP), almost 40 percent of small businesses never reopen their doors after a flood disaster, because just a few inches of water can cause tens of thousands of dollars in damage.

In an increasing number of areas around the country, the risk of flood is even more acute. Over 178 million acres have been designated as floodplains by FEMA. These areas are growing steadily, and more people are finding themselves within a floodplain as flood maps are redrawn. The new maps reflect changes in conditions and new development, and also improvements in scanning technology, additional years of climate, flood and topographic data, and more advanced prediction models.

Building in floodplains, or Special Flood Hazard Areas (SFHA) designated by FEMA, is strictly regulated by the NFIP, the International Building Code, ASCE national reference standards, and by local community codes. Deciding on a non-residential building's floodproofing strategy will have a direct connection to the project's cost, to the safety of the building's occupants and the survivability of the building itself, and to the risk of liability for the designer and builder in case of flood damage.

With luck, most of the buildings built to NFIP standards will never face a catastrophic flood, but effective floodproofing measures also result in more durable structures that require less maintenance and suffer an estimated 80 percent less damage every year. If the worst case does occur, the right floodproofing option will increase a building's "sustainability" in a fundamental way, often determining whether or not the building will survive at all.

"Dry" Floodproofing

The only exception to the requirement for flood openings is for non-residential buildings that are designed and engineered to be floodproofed by meeting stringent requirements to be watertight.

Using dry floodproofing essentially means making the building, and all its utility systems, completely watertight and impermeable to the passage of water below the BFE. (Dry floodproofing is not permitted in V zones, where breakaway walls are required below the BFE.)

Dry floodproofing can include passive measures such as waterproof sealants and coatings on walls and floors, water barriers, and automatic backflow prevention valves and sump pumps. But it also may include active measures, for instance, flood gates, shields or doors, which must be manually activated when high water is expected. The design has to take into account important planning considerations such as how much warning time is likely to be available, how people will enter and exit the building, what the flood frequency in the area is, and what floodwater velocities, flood depths and debris impact

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can be expected.

The choice to use dry floodproofing triggers a requirement for a floodproofing certification: Floodproofing Certificate for Non-Residential Structures (FEMA Form 81-65). Among other requirements, the certificate must state: 1) the elevation to which the building has been dry-floodproofed, 2) that the building, together with utilities and sanitary facilities, is watertight to the floodproofed elevation, with walls that are substantially impermeable to the passage of water, and 3) that the structure is capable of resisting hydrostatic, hydrodynamic and debris impact forces, including the effects of buoyancy.

Every building floodproofed in this way within the Special Flood Hazard Area must also be certified by a design professional, as stipulated in NFIP regulations: "Provide that where a non-residential structure is intended to be made watertight below the base flood level, a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with the accepted standards of practice for meeting the applicable provisions of … this section." Note: Detailed information on dry floodproofing is found in FEMA's Technical Bulletin 3, Non-Residential Floodproofing – Requirements and Certification.

"Wet" Floodproofing

As mentioned above, NFIP regulations require wet floodproofing in residential buildings, and it is also an option in non-residential buildings. Costs are lower and human activity is not needed, a definite plus under emergency conditions where warning is short and travel is difficult or impossible. In addition, in the case of engineered automatic flood vents which have been pre-certified under the International Code Council Evaluation Service (ICC-ES), the certification process is substantially streamlined, and liability for the performance of the product during a flood is the responsibility of the product manufacturer rather than the certifying design professional.

Wet floodproofing measures allow water to flow in and out of the lower, uninhabited portions of the building such as parking garages, building access areas and crawlspaces. Installation of flood openings—most commonly flood vents—in the walls allows for the automatic equalization of flood levels on both sides of the walls, preventing the catastrophic damage that can be caused by unbalanced hydrostatic forces created during floods.

When flood water rises against the building enclosure and is unable to flow into the space, or recedes much more quickly than it entered, unequal pressure is created on opposite sides of the walls. The magnitude of hydrostatic pressure increases linearly with water depth. Unless the pressure is equalized or relieved, walls can be damaged or even fail. If they are load bearing walls the building will collapse. Lateral pressure pushes against exterior walls, while vertical force can shift and separate the foundation or walls, and even in some cases literally lift the structure. When significant floodwaters are present, forces of buoyancy can float the entire structure away.

Flood vents equalize the pressure of the forces acting upon the structure, by letting the water flow evenly in and out.

Code-Compliant Flood Vents

Requirements for flood opening sizes, location, number and other characteristics are primarily governed by NFIP regulations. The major requirements are outlined below, but

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Flood openings that are not sized properly, such as this air vent, can become blocked with debris and rendered ineffective.

the FEMA document that provides extensive details about meeting flood opening regulations is Technical Bulletin 1-2008, Openings in Foundation Walls and Walls of Enclosures. The American Society of Civil Engineers (ASCE) has developed the standard Flood Resistant Design and Construction (ASCE 24). This standard applies to buildings and site developments proposed in flood hazard areas. It is also referenced by the International Building Code. ASCE 24 Section 2.6.2.2 contains installation and design criteria for engineered openings. Local ordinances also refer to these three documents as a basis of their own floodproofing ordinances.

The major requirements are as follows:

- The International Building Code (by reference to ASCE 24) requires a "minimum of two openings on different sides of each enclosed area."
- The NFIP's definition of an enclosure is any portion below an elevated building that is fully shut in by four rigid walls. Basements are not allowed in Special Flood Hazard Areas.
- The bottom of the opening must be no more than one foot above the grade that is immediately under the opening, either the adjacent ground level, or the interior grade, whichever is higher.
- All materials below the BFE must be made of flood resistant material.
- ASCE 24 is referenced in all regulations, and it requires that a 3-inch sphere should be able to pass through the flood opening.
- ICC building codes require that openings be screened to prevent the entry of insects, rodents, birds, etc. Any opening that includes a cover is an unacceptable measure according to FEMA TB-1.
- The NFIP's standard for non-engineered openings requires one (1) square inch of net open area for every square foot of enclosed area. Any part of a screen, grate or louver that impedes entry will be subtracted from the net opening area.
- Wet floodproofing measures that satisfy NFIP requirements must be automatic.

Engineered and Non-Engineered Flood Vents

Products used to meet the flood opening requirements outlined above fall into two broad categories. Non-engineered flood openings need to meet the NFIP's requirement of 1 square inch of net open area for every square foot of enclosed area. This category includes mostly air vents if they have been rigged in the open position to meet the requirements.

Engineered flood vents can either be designed individually as site-specific solutions to meet specific performance criteria, or they can be pre-tested and certified products. However, just as with dry floodproofing, if a unique, project-specific engineered flood vent is being specially designed for the project, it will trigger a requirement for additional documentation, in this case a Flood Opening Certification signed by a registered design professional stating that the engineered vents will meet ASCE 24 standards and have all other required design performance characteristics. A pre-tested product certified through the ICC-ES process will already have the required documentation. ICC-ES certified flood vents are certified to provide floodproofing for a specified amount of square feet, as described in the Certification Methods section below.

If openings are found not to be compliant, the floor of the crawlspace or the floor of the

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enclosure becomes the "lowest floor." In those cases, the result will be significantly higher flood insurance premiums, especially if the floor of the crawlspace or enclosure is more than a foot or two below the BFE.

(As noted above, all these requirements are discussed in more detail in Technical Bulletin 1-2008, Openings in Foundation Walls and Walls of Enclosures.)

Pre-tested and certified engineered flood vents in custom configurations were used to meet all flood venting and air ventilation code requirements in the new James E. Clyburn Research Center at the Medical University of South Carolina

Certification Methods

As has been discussed, there are two certification methods available under FEMA/NFIP and local community ordinances.

For dry floodproofing methods, a Floodproofing Certificate for Non-Residential Structures (FEMA Form 81-65) is required. For unique project specific engineered flood openings designed to provide wet floodproofing, an Engineered Opening Certification is required. Both of these require information about the location of the property, the license of the design professional making the statements, with the original raised seal (all documents for these certificates must be original, not photo-copied), documented square footage of openings and number of vents, and other detailed information about the design of the system. These must be submitted to the surveyor and local building official in addition to being attached to the Elevation Certificate required by FEMA.

The second engineered opening certification method is for products for which an Evaluation Report has been issued by the International Code Council Evaluation Service, Inc. (ICC-ES), a subsidiary of the International Code Council, Inc. (ICC).

The ICC-ES issues such reports for a variety of building products, methods, and materials. Evaluation Reports are issued only after the ICC-ES performs technical evaluations of documentation submitted by a manufacturer, including technical design reports, certifications, and testing that demonstrates code compliance and performance.

For pre-tested engineered flood vents that have been certified by ICC-ES, their provided Evaluation Report document is all that is required for submittal with the plans and the Elevation Certificate.

Common experience indicates that building officials favor the simplicity of the ICC-ES as a method of evaluating products, and a 2006 national survey substantiates this. Probably the most important element for code officials is their judgement in the field, but ICC-ES certification means the product has already been thoroughly tested and its performance can be reliably predicted. Insurance agents also use the certification to generate premiums. When certified engineered flood openings are installed it guarantees the lowest possible flood insurance premium for the property owner. ▲

"Floodproofing Non-Residential Buildings" was the Continuing Education article from the September 2012 *Architectural Record.* You can read the full article at continuingeducation.construction.com/article.php?L=175&C=923&P=1

NFIP Coordinators Corner

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The North Carolina Floodplain Mapping Program's (NCFMP) Map Maintenance Program

The North Carolina Floodplain Mapping Program (NCFMP) is poised for releasing new Preliminary Flood Hazard information in conjunction with Map Maintenance in a new digital format starting in May, with the release of Alamance, Chatham, and Orange Counties map maintenance. Under the Federal Emergency Management Agency's (FEMA) Map Modernization and now under Risk MAP, FEMA and North Carolina, as FEMA's Cooperating Technical Partner, have made positive strides in transitioning the mapping of flood hazards to a digital environment. The Flood Insurance Reform Act of 2004 allowed FEMA to treat the digital flood hazard information as official, regulatory data for the purposes of flood insurance and floodplain management activities, with equivalent legal standing to the analog (paper) products. With the pending release of the first three counties for digital map maintenance, North Carolina is making the transition from traditional hard-copy flood hazard data and products (i.e., Flood Insurance Studies and Flood Insurance Rate Maps) to flood hazard data within a digital geodatabase .

While positive programmatic strides have occurred, significant cost savings can be generated for the NFIP by reducing or eliminating cartographic map development and distribution. Although NFIP digital products are now generated primarily using GIS and other software production tools, the products themselves unduly replicate legacy analog products, thereby incurring unneeded delays and cartographic costs. In particular, significant costs are still being incurred to prepare panel-based products designed to be printed on large format printer/plotters. In the current economic climate, federal, state, and local budgets remain extremely tight. In the face of this reality, the ability of government programs to continue operations on flat and/or reduced budgets is critical. Both the U.S. Congress and Office of Management and Budget are directing federal agencies to do more with less and realize savings through efficiency gains.

With this in mind, NCFMP, in concert with FEMA, believe that significant savings can be achieved through the database driven generation, management, and digital display of all flood hazard data and products. NCFMP has petitioned, and received authorization by FEMA, to implement a digital data display environment (D2E) for the 50 eastern counties in North Carolina to demonstrate the resulting efficiencies and cost savings through significantly reducing or eliminating cartographic / hard copy products development and distribution. While cutting costs is important, the NCFMP is committed to ensuring that this new digital environment meets all current FEMA and NCFMP technical, quality, statutory, and regulatory standards. Following the demonstration, the NCFMP will implement D2E throughout the state as new Preliminary flood hazard data is issued to Map Maintenance Counties, and FEMA will then be able to apply the lessons learned to the rest of the nation.

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Through the D2E effort, regulatory NFIP products which are currently provided to local communities and stakeholders in a hard copy format will become digitally accessible via a website interface and/or via print on demand. The following table describes those NFIP products and the mechanism for their delivery under a D2E effort.

The key attributes of the new Digital Display Environment (D2E) are:

- Geospatially aware,
- Database driven,
- Allows on-demand products, and
- Operates without the constraints of cartographic rules.

The D2E demonstration in North Carolina will provide the following benefits:

- Enhanced flood risk communication capabilities via digital data integration and display
- Expandable platform to add other risks
- Efficiencies/savings by transitioning away from a cartographic environment
- More extensive and higher quality hazard and risk assessments for communities in North Carolina via realized efficiencies / savings

D2E will leverage much of the work that has been performed to date such as North Carolina's statewide Light Detection And Ranging (LiDAR) and statewide DFIRMs that include advanced study data, as well as data and tools for multi-hazard risk assessments being developed as part of the Integrated Hazard Risk Management (IHRM) program and the FEMA Risk MAP (Mapping, Assessment, and Planning). It is anticipated that the IHRM viewer, along with the NCFMP's current online data viewer – the Floodplain Management Information System (FMIS), will be utilized to deliver products to users digitally.

As part of the Digital Display Environment and Map Maintenance Initiatives, the North Carolina Floodplain Mapping Program (NCFMP) has created a website to disseminate information to mapping partners and the public. Starting in April 2013the website, Flood Risk Information System (FRIS) will be linked from the current NC Flood Mapping Information System (http://floodmaps.nc.gov/fmis/), andcontains digitally accessible flood hazard and risk data that are database driven, allowing for print-on-demand products such as flood maps and Flood Insurance Studies (FIS). The website, shown on the right, also provides geospatial base map data, imagery, LiDAR data, along with hydraulic and hydrologic models that will be available for download and use.

For 2013 the NCFMP is scheduling the tentative release of Preliminary flood hazard data in a digital format to the FRIS for the following Counties: Duplin, Johnston, & Wayne Counties in July, Harnett, Lee, Columbus & Bladen Counties in August, New Hanover, Durhm and Wake Counties in December.

Online LOMC

At the end of 2012, FEMA rolled out its new Online LOMC application. Currently, only Letters of Map Amendment (LOMA) may be applied for using this new online tool. However, in June 2013 FEMA anticipates added functionality of the site to accept the full range of MT-1 and MT-2 LOMC applications.

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NFIP Coordinators Corner

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Online LOMC provides a convenient way for applicants to upload all information and supporting documentation instead of filing paper forms and data through the mail. The tool automatically assigns a case number, and allows users to check the status of their application online. Once full functionality is achieved on the site, MT-1 and MT-2 users will also be able to submit their applications, data, and pay the required case processing fees. There is no difference in the data requirements between the Online LOMC and paper form.

So, how is Online LOMC any different than eLOMA? Online LOMC allows anyone that creates a user account to submit LOMC applications, while eLOMA is designed solely for licensed professionals to file simple LOMA requests for single properties without fill. The eLOMA application also allows FEMA to make a determination in minutes rather than the standard case time. Cases submitted through Online LOMC will be reviewed and processed the same as cases submitted by mail. However, it should provide more efficient communications with LOMC processing staff. The tool allows the applicant to save information and complete the application at their convenience, provides real-time updates on the application status as well as an inventory of all in-progress and previous applications submitted online, and gives frequent applicants the ability to manage multiple LOMC requests online.

Online LOMC may be accessed via https://hazards.fema.gov/femaportal/onlinelomc.

To learn more about Online LOMC, visit www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/change-flood-zone-designation-online-letter.

United States
Environmental Protection
Agency

Source: US EPA

Coastal Wetlands Reports Released

EPA is releasing four Coastal Wetland Review reports containing the results of meetings with stakeholders in coastal watersheds throughout the Atlantic and Gulf coasts. EPA convened these meetings to better understand regional stressors on wetlands in coastal watersheds, local protection strategies, and key gaps that, if addressed, could help reverse the trend of wetland loss. This work is part of an interagency effort which includes EPA, the National Oceanic and Atmospheric Administration (NOAA), and other federal agencies to reduce and reverse coastal wetlands loss as follow-up to a U.S. Fish and Wildlife Service/NOAA report, Status and Trends of Wetlands in the Coastal Watersheds of the Eastern United States, which identified an average rate of loss for wetlands in coastal watersheds of 59,000 acres per year. The reports and broader information about coastal wetlands and the coastal wetlands initiative can be found at http://water.epa.gov/type/wetlands/cwt.cfm.

Climate Tool Available Online

An updated version of EPA's Climate Resilience Evaluation and Awareness Tool (CREAT) is now available for download at **www.epa.gov/climatereadyutilities**. The tool assists drinking water, wastewater, and stormwater utilities, in identifying climate change threats, assessing potential consequences, and evaluating adaptation options. Increasing climate readiness can help build resilience to extreme weather events. Developed under EPA's Climate Ready Water Utilities initiative, CREAT 2.0 builds on the capabilities of the first version of the tool by providing local historical climate data, as well as more comprehensive downscaled climate change projections. This new version uses a flexible framework, which allows utilities, regardless of size or type, to consider climate impacts at multiple locations and to assess multiple climate scenarios. Please e-mail CREAThelp@epa.gov with any questions or feedback.

MOU for Healthy Watersheds

EPA, The Nature Conservancy, and the Association of Clean Water Administrators (ACWA) have jointly signed a memorandum of understanding (MOU) that formalizes a mutual collaboration between these groups as they strive to develop and implement healthy watersheds programs in states and with regional aquatic ecosystem programs to help sustain an integrated network of healthy watersheds across the country. EPA, The Nature Conservancy and ACWA agree to meet periodically to track progress related to developing and implementing healthy watersheds programs in states and with regional aquatic ecosystem programs, as well as promote the sharing of educational and scientific information such as data gathering and sharing of watershed health assessments and healthy watershed implementation projects. For more information, visit www.epa.gov/healthywatersheds.

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EPA Releases Performance Maps

On Feburary 7, 2013, the U.S. Environmental Protection Agency (EPA) announced the release of state dashboards and comparative maps that provide the public with information about the performance of state and EPA enforcement and compliance programs across the country.

Most states and tribes in the United States have the authority to implement and enforce many of the nation's air, water and waste laws. The dashboards and maps include state level data from the last five years and provide information including the number of completed inspections, types of violations found, enforcement actions taken, and penalties assessed by state.

Users can customize the dashboards to view state activity, EPA activity, or combined activity. Where available, the site also allows users to view national averages and display state enforcement trends over time.

The interactive state performance dashboards are located on EPA's Enforcement and Compliance History Online (ECHO) website. ECHO is an EPA transparency tool that allows the user to map federal and state inspection, violation, and enforcement information for more than 800,000 regulated facilities. The state dashboards and comparative maps that are available in ECHO are part of EPA's commitment to increasing transparency and providing data to the public in a format that is easy to understand and use.

View the state performance dashboards and comparative maps at www.epa-echo.gov/echo/stateperformance/comparative_maps.html.

EPA's ECHO website
www.epa-echo.gov

CFM® Corner

The North Carolina CFM Program is administered by ASFPM and is a separate fee from your NCAFPM membership fees. Remember that keeping your membership renewed annually with NCAFPM will lower your biennial CFM renewal costs significantly.

Congratulations to North Carolina's newest CFMs!

Since our 2012 Annual Conference, these people have passed the CFM exam:

Tommy Anderson
Tracy Barnes
Joshua Bell
Corey Cavalier
Eric Christopher
Gregory Coulson
Shelley Cox
Caroline Cunningham
Gerald Dale
Monica Davis
Maureen Dougherty
Maria Evans
Rebecca Ferres
Scott Gentry
Ryan Griffith
Meredith Guns
Jeremy Hardison
Ashley Hayes
Kinsey Holton
Matthew Hooper
Marc Horstman
Keith Huff
Morgan Jethro
Curtis Johnson
Lisa Kirby
Ralph Lilley
Nicole Macaluso
Callion Maddox
David Morton
Frank Park
Kenneth Pierce
Anne Regan
Tiffany Sanders
Michael Sandy
David Skurky
Harold Smith
Jeremy Sparrow
Dervin Spell
David Sudderth
Graham Summerson
Charles Terry
Preetham Thotakuri
Daniel Tomczak
Kenneth Vafier
Andrew Ventresca
William Vinson
Angela Welsh
Mike Wayts
Dewey Webb
Traci White
Ryan Wiedenman
Matthew Williams
Stephan Windsor

Reminder
Notify **Anita Larson 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 e-mail address.

For more information and ordering:
ZeroInternational.com
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.

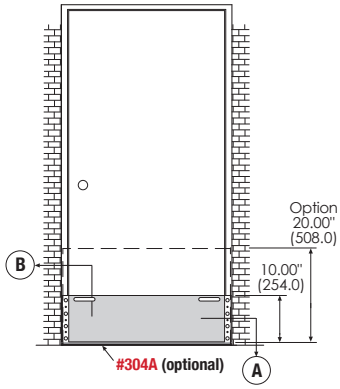
Available in 10, 20, 24, 30 and 36 inch high barriers (other sizes available upon request), the lightweight aluminum shield requires no tools or muscle strength for insertion into premounted vertical channels attached to either the door frame or adjacent walls.

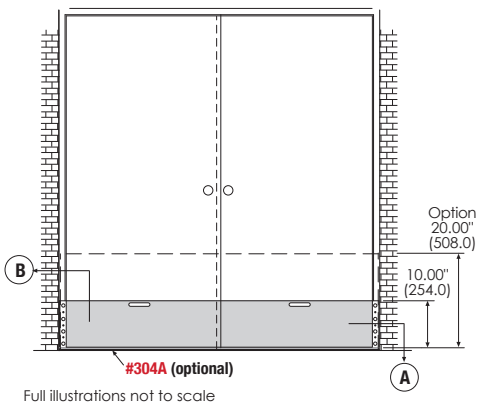
The unit complies with guidelines of the Federal Emergency Management Agency (FEMA) and Federal Insurance Administration (FIA) for use on doors in flood-prone areas.

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.

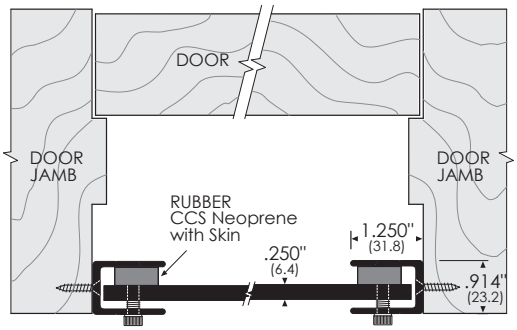
Part#	**2070A - 10**	**10" High**
	2070A - 20	**20" High**
	2070A - 24	**24" High**
	2070A - 30	**30" High**
	2070A - 36	**36" High**

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

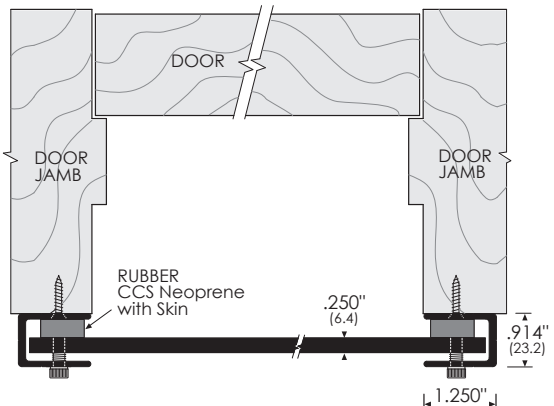




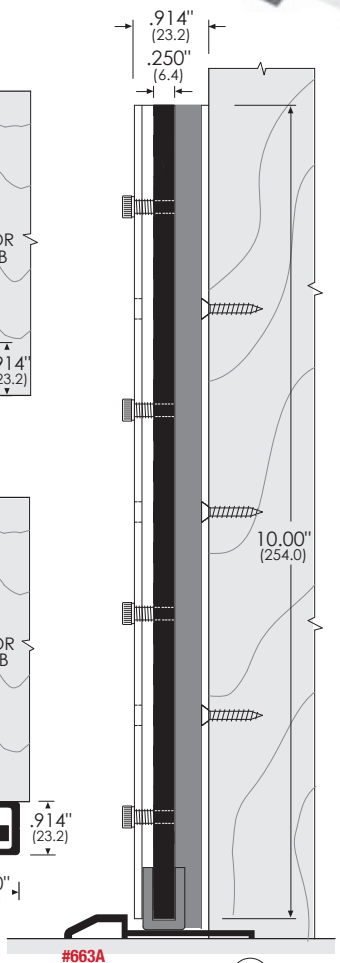
Full illustrations not to scale



Section (A) **Installation option 1 - INSIDE MOUNT**

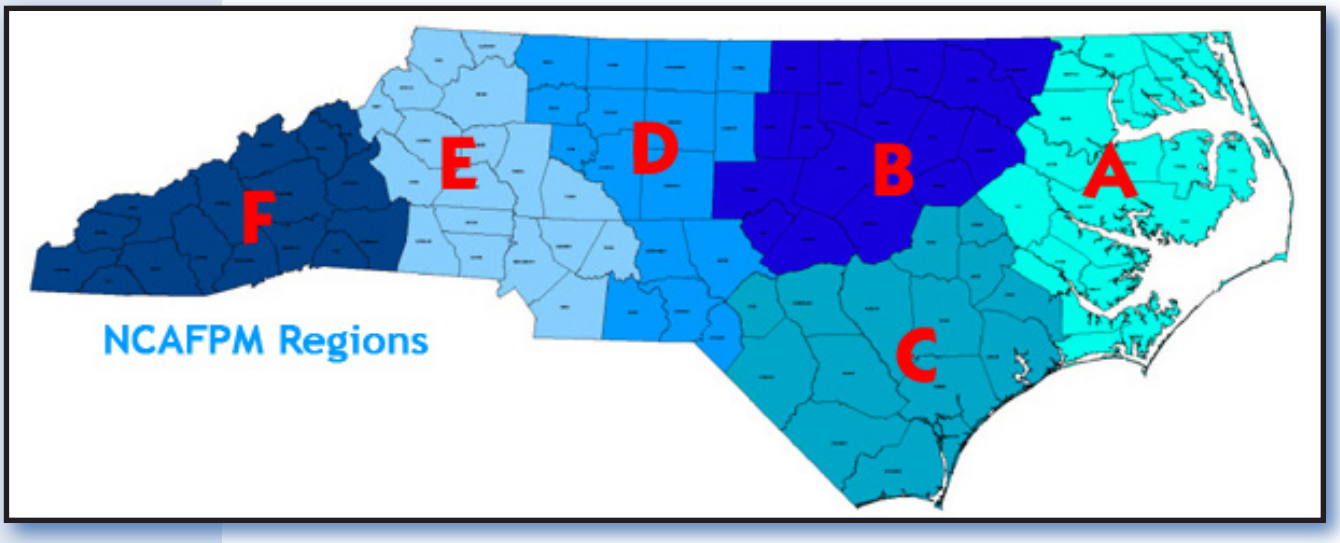


Section (A) **Installation option 2 - OUTSIDE MOUNT**



Section (B)

NCAFPM Regional Reports



Region B

Randy Mundt, AICP, CFM

Two counties in Region B are among five counties in North Carolina to have received the first map maintenance updates that will be made "Effective" by FEMA April 16, 2013. The counties – Franklin and Wilson- will join Lenoir, Greene and Wilson Counties to have their flood hazard data updated through the stream-centric approach that the North Carolina Floodplain Mapping Program (NCFPM) applies for map maintenance. Because the NCFMP applies a seamless, statewide paneling scheme for mapping flood hazards, twenty-eight other communities that have at least some portion of their jurisdiction shown on panels being updated panels for the new effective panels will also be adopting the new data and panels; this includes nine other counties (Craven, Granville, Johnston, Jones, Nash, Pitt, Vance, Wake, and Wayne).

The NCFMP is poised for releasing new Preliminary Flood Hazard information in a digital format starting in May, with the release of Alamance, Chatham, and Orange Counties map maintenance. The following Counties are tentatively expected to have new Preliminary data released soon: Johnston County (July), Lee and Harnett Counties (August), Wake and Durham Counties (November).

There has been some good progress on mitigation activities in Wake County: the Milner Inn on Capital Blvd. in Raleigh -which has regularly flooded annually- is using PDM-repetitive flood claims funding to purchase and remove the commercial motel which is annually flooded. Also, Raleigh will be getting a new tornado safe room for the Parrish Manor related to PDM 2012 funding (which is pending and expected very soon). Person County will be getting an EOC retrofit with a new generator as a result of a mitigation grant. Finally, two regional Hazard Mitigation Plans will be getting funded and underway for Nash/Edgecombe/Wilson Counties, and also for the thirteen communities of Wake County.

— continued on next page

Region C

Tony Wilson, CFM

The Town of Wrightsville Beach just completed our 5 year cycle visit for the CRS Program with ISO representative **Mandy Todd**. The Town is currently a Class 8 and looking forward to improve to a Class 7 in the future.

The Town of Wrightsville Beach, New Hanover County and the City of Wilmington Officials held a working group discussion in February to address how to be consistent enforcing our flood plain ordinances and how to strengthen our ordinances. In that meeting we discussed solid entry doors at the top of enclosed foyers, V-zone certification after construction, non-Conversion agreements and flood vents in breakaway walls. Our communities may be adding these items to our Flood Plain Ordinances.

NFIP FORUM

Wilmington Regional Association of REALTORS® hosted a NFIP forum on March 13. Included as speakers were April Brown from the National Assoc. of REALTORS in Washington DC, **Maureen O'Shea**, Eastern Branch Planner NC Dept. of Public Safety and Attorney Thoran from the NC Real Estate Commission. The forum goals were:

- To learn the truth about NFIP – How solvent is it? How long will it be around? Who does it impact?
- To discover why having flood insurance is important & what happens if a homeowner does not have flood insurance
- To get clarification on the current statutory limits on coverage of multi-business commercial structures
- To get educated on what forms are required for disclosure and what new legislation means for your clients

Later that day, **Maureen** met with floodplain management staff from New Hanover County and the City of Wilmington to discuss:

- Biggert-Waters Flood Reform Act of 2012
- New Elevation Certificate
- New format to ncfloodmaps.com

As floodplain managers, we can help reduce community vulnerability by sharing information about flood risks and lessons learned. Our role in educating the public prepares communities for flood disasters and helps them recover. So, I would like to encourage all Flood Plain Managers in Region C to help me keep current on your flood issues and accomplishments by contacting me at: twilson@towb.org

We hope to see you in Wrightsville Beach in April.

— continued on next page

NCAFPM Regional Reports

Region D

Drew Blackwell, CFM

"10 Tips to Improve your Love Life!" OK, so this is not related to floodplain management (if it is, then that is a whole separate issue). I saw this headline on a magazine cover and it seems that every magazine has at least one list that you are encouraged to follow: '5 Ways to do This'… '8 Tricks to Achieve That.' Why not make one for floodplain management? Better yet, let's make it a collaborative effort! I have started a post on NCAFPM's Facebook and LinkedIn group pages titled '20 Ways to Improve Floodplain Management in North Carolina.' I have kick started it with a couple of ideas and encourage everyone to contribute to the list. Whether your ideas are tried and proven, or something brand new, the goal is to help exchange methods of floodplain management among professionals in our field as well as create another way to reach out and connect to floodplain managers in our group. Let's see if we can get a list of 20 ideas!

Haven't joined the NCAFPM's Facebook or LinkedIn groups yet? What are you waiting for?! Frequent posts regarding information on the state chapter, upcoming conferences, and articles related to our industry are posted to these groups and they typically generate good, productive discussions.

Region F

Brad L. Burton, CFM

Greetings once again to all from the "pointy" end of the state. Spring is allegedly here, yet for the second day in a row as I write this, it is snowing outside. No accumulation; just blowing snow … and doggone it's cold!

Spring is when we guys excitedly get the golf shirts back out, we follow intently how the boys of summer are progressing at Spring Training, and we go to the trouble of bringing our own rock to the river to have a place to stand for the opening of trout season (a Western NC reference, sorry).

Spring is the time when the world starts anew and things are fresh and clean.

Mister or Misses Floodplain Manager: Is it time to clean up your FDPO? Is there that one (or more) ambiguous or poorly written section(s) that seem to come up time after time? Looking back, after you have plodded through it all AGAIN during a permit or violation, do you always say to yourself, "Self…I gotta fix that so that is clear, or understandable, or easier to read or WHATEVER…"

It's Spring. Now's the time to freshen up! Write that text amendment or strike that ambiguous section (assuring of course you're not getting rid of something important or something you just don't want to deal with)!

What about your files? Without the wringing of hands and the gnashing of teeth, can you produce the Elevation Certificates for your jurisdiction? Usually I can, but when Janice (my office manager) is here to help me find them, recovery is always a sure thing. Suffice to say, if Janice gets abducted by aliens tomorrow I AM SUNK. This bothers me and I pledge I am going to do something about it. Are you in my shoes?

Different topic next time around — I promise! I hope to see everyone in Wrightsville Beach!

2013 Conferences & Annual Meetings

NCAFPM Annual Conference
Holiday Inn Resort, Wrightsville Beach
April 28-May 1, 2013

www.ncafpm.org

The Annual Conference for our Association will return to Wrightsville Beach in 2013. Always a popular venue, NCAFPM last held our conference here in 2010. See front page for more details.

ASFPM Annual Conference
Connecticut Convention Center, Hartford, CT
June 9-14, 2013

www.floods.org

ASFPM's 37th Annual National Conference, "Remembering the Past - Insuring the Future" will be held at the Connecticut Convention Center in Hartford. The ASFPM annual conferences are recognized as the most important floodplain conference in the United States year after year. With more than 100 speakers and well over 1200 participants, they are the national conferences all community, state and federal floodplain managers plan to attend. And because of that, many of the most important consulting firms and product vendors associated with floodplain management attend.

In recent years, the attendance has had about an equal number of private, local, state and federal participants from all over the United States and several foreign countries. The conference is conducted by the Association of State Floodplain Managers, the world's leading voice for sound floodplain management, with 34 Chapters and over 15,000 members world-wide.

For more information, including registration and hotel reservations, go to www.asfpmconference.org/

APWA-NC Stormwater Conference
Hilton Riverside Wilmington Hotel
September 16-17, 2013

northcarolina.apwa.net/

The APWA-NC Stormwater Management Division Conference will be returning to the coast this year! Issues and concerns related to water quality and stormwater management continue to play a significant role in the world of public works, shaping technical focus and policy throughout government and private industry. The field of stormwater management is changing every day, and what better place than the Wilmington Riverfront to ensure that you remain abreast of the latest developments in the industry in 2013. Join us as we once again provide a variety of learning opportunities in a fun and friendly atmosphere.

Call for Abstracts: If you have an idea for a presentation topic or case study involving the stormwater industry, regulatory compliance, program management, innovative engineering or technology, or any other topic which is relevant to the stormwater community, please submit an abstract to blair.hinkle@rockymountnc.gov prior to close of business on Friday, May 3.

Education & Training

North Carolina Cooperative Extension brings the resources of our land-grant universities, NC State University and NC A&T State University, to citizens of the State. Stop by or call our office to learn more about the many ways your Extension office can serve you.

NEW! Stormwater BMP Retrofit & Rehab

This full day training presents stormwater rehabilitation considerations and identifies retrofit opportunities. It is intended to be a follow-up for designers and regulators who have completed the NCSU's BMP Inspection and Maintenance Certification. More information: www.bae.ncsu.edu/stormwater/training/bmp_retrofit.html.

April 17, 2013 - Wilmington, NC
April 19, 2013 - Raleigh, NC
May 14, 2013 - Durham, NC
June 6, 2013 - Dallas, NC

Bioretention Summit: Ask the Researcher

This training delivers the most up-to-date research-based information that will lead to perhaps dramatic improvements in how bioretention cells are credited by regulators, designed by engineers and landscape architects, and built and maintained by contractors and maintenance personnel. More information: www.bae.ncsu.edu/stormwater/training/bioretention_summit.html.

May 15-16, 2013 - Washington, DC
June 17-18, 2013 - Chicago, IL

Innovative Rainwater Harvesting (RWH) Workshop

This workshop describes the types of RWH systems typically found throughout the state of North Carolina and presents innovative design modifications for increasing the stormwater management benefits of these systems. A revised version of the NCSU Rainwater Harvester Model will be debuted and participants will learn how to use the new version of the model to design systems, estimate stormwater management benefits and determine if a given system will meet state requirements for stormwater credit. More information: www.bae.ncsu.edu/stormwater/training/waterharvesting.html.

May 29, 2013 - Craven County Center, New Bern, NC
June 4, 2013 - JC Raulston Arboretum, Raleigh, NC
June 11, 2013 - Guilford County Center, Greensboro, NC
June 12, 2013 - Crowne Plaza Hotel, Charlotte, NC

Stormwater Wetland Design

This training will focus on new information regarding stormwater wetlands collected by NC State and others. Topics to be discussed for the first time are designing wetlands to store carbon, establishing nutrient removal benchmarks to meet watershed rules, and navigating the permit process. This class is intended for those with experience in stormwater management practice design, review, and supervision. A field tour to visit constructed stormwater wetlands incorporating many of the newest design features is conducted. Registration starts at 8:30am with class starting at 9am. Workshop concludes by 4:45pm. More information: www.bae.ncsu.edu/stormwater/training/stormwater_wetland.html.

August 28, 2013 - New Bern, NC

FY2013 319 Grant Program: Request for Proposals

Proposals are now being solicited for projects to address nonpoint source pollution in North Carolina. Approximately $1.3 million in federal funds are available for water quality restoration projects. The funds are provided by the U.S. Environmental Protection Agency pursuant to Section 319(h) of the Clean Water Act. State and local governments, interstate agencies and public and private nonprofit organizations are eligible to apply. Applications are due by May 23, 2013.

Please visit the Division of Water Quality's 319 Grant Program website (http://goo.gl/mSy0i) for more information or to download a copy of the RFP and application.

For questions about the FY 2013 319 RFP or project eligibility for 319 grant funding, please contact Kim Nimmer at 919-807-6438 or kimberly.nimmer@ncdenr.gov.

Combined Self-Monitoring and Self-Inspection Form

The Sedimentation Pollution Control Act was amended in 2006 to require that persons responsible for land-disturbing activities inspect a project after each phase of the project to make sure that the approved erosion and sedimentation control plan is being followed.

Rules detailing the documentation of these inspections became effective October 1, 2010.

To simplify documentation of Self-Inspection Reports and NPDES Self-Monitoring Reports, a combined form is now available. The new form was developed jointly by the Division of Water Quality and the Division of Energy, Mineral and Land Resources. The requirements of both agencies can be met using the combined form.

The self-inspection program is separate from the weekly self-monitoring program of the NPDES Stormwater Permit for Construction Activities. The focus of the self-inspection report is the installation and maintenance of erosion and sedimentation control measures according to the approved plan. The inspections should be conducted after each phase of the project, and continued until permanent ground cover is established.

The Combined DWQ-DEMLR Construction Stormwater Monitoring form will be available as a PDF and Word document from the Land Quality web site, http://portal.ncdenr.org/web/lr/erosion.

If you have questions, please contact the Land Quality Section at a DENR Regional Office.

Calendar

April 28-May 1, 2013
NCAFPM ANNUAL CONFERENCE
Holiday Inn Resort
Wrightsville Beach, NC
www.ncafpm.org

June 9-14, 2013
ASSOCIATION OF STATE FLOODPLAIN MANAGERS ANNUAL CONFERENCE
Connecticut Convention Ctr
Hartford, CT
www.floods.org

September 16-17, 2013
APWA-NC STORMWATER CONFERENCE
Hilton Riverside Wilmington Hotel
Wilmington, NC
northcarolina.apwa.net

Floodplain Management Resources

Technical Assistance (State)

NC Emergency Management
National Flood Insurance Program

NFIP State Coordinator: John Gerber, PE, CFM
jgerber@ncem.org | 919-825-2317

NFIP Planners
Central Area: Milton Carpenter, CFM
mcarpenter@ncem.org | 919-825-2302

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 | 919-825-2300

NC CLOMR/LOMR Submittals

www.ncfloodmaps.com/mt-2_forms.htm
LOMC Manager/Community Development Planner: Steve Garrett, CFM
sgarrett@ncem.org | 919-825-2316

Meck. Co. CLOMR/LOMR Submittals

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

Hazard Mitigation Grant Program & Flood Mitigation Assistance Prog

Chris Crew, Mitigation Section Chief
919-825-2305

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

Technical Assistance (FEMA)

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

www.fema.gov/about/regions/regioniv/

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

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

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

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*Flash*Flood 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, 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 *Flash*Flood 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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