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The DoubleTree by Hilton
in Asheville, North Carolina
is pleased to host the
7th Annual

Fall Floodplain Institute

NORTH CAROLINA ASSOCIATION OF FLOODPLAIN MANAGERS

Asheville, NC

October 24-26, 2012

The North Carolina Association of Floodplain Managers annually hosts a Fall Floodplain Institute, providing an opportunity to attend workshops and presentations, take the Certified Floodplain Manager exam, and mingle with your fellow floodplain managers. The Fall Floodplain Institute offers training in a professional, friendly environment, while also offering another opportunity throughout the year for Floodplain Managers to earn CECs.

This year's 7th Annual FFI will be held in Asheville at the Doubletree Biltmore Hotel. The Doubletree is one block from Biltmore Estate, and within walking distance of Biltmore Village. The hotel is approximately two miles from downtown Asheville.

To register online and pay by credit card, please follow the directions on our website (www.ncafp.org). To register by mail, please complete the online registration, print it out and submit with your payment. The registration fee is \$185 and includes Wednesday afternoon plenary session (2-5:30pm), Thursday and Friday conference presentations, break refreshments, Thursday lunch, Wednesday Meet & Greet, and Thursday evening social. Guest tickets are available for the conference social. One day rates are available for the conference. The deadline to register is October 13.

Don't forget the traditional golf outing, which will be held on Wednesday, October 24 at Glen Cannon Country Club in Pisgah Forest, near Brevard. The cost to play is \$55. Contact **Brad Burton** at 828-885-5630 or bburton@cityofbrevard.com to register and pay, or you can pay with your conference registration.

Information about the Certified Floodplain Manager (CFM) exam, continuing education credits, and room reservations is available on our website. The agenda will be posted by October 1. Hope to see you in Asheville in October! ▲

From the Chairman's Desk



JOHN FULLERTON, CFM
NCAFPM CHAIRMAN

Hello from Wilmington. With all sincerity and humility, I thank you for your support and the support and confidence you have put into our present Board. With you as partners, we will strive to continue what has been done so well already and also to look for new ways to keep North Carolina floodplain management vital and beneficial to our citizens.

The work of NCAFPM really starts with each one of us as members. Whether our role is participatory, instructive, or planning, the

Association depends on us and our input toward the protection of life and property in our state. We believe this is done more effectively with a sharing of ideas, experiences, knowledge and information. It is this atmosphere that we have established and plan on continuing. You can assist by providing feedback, volunteering, and being willing to relate your experiences when afforded the opportunity. So many of our members do this so well already and this is a major reason for the success of NCAFPM.

Good decision making, goals, leadership, motivation, and teamwork are key components to a successful organization. The fabric that binds these qualities together is communication. At a recent Board meeting, **David Key** suggested that one of the Board's focuses should be improved communications within the organization. This suggestion was endorsed by those present. Discussion involved our website, Facebook, Twitter, LinkedIn, and other avenues to improve contact and communication.

Your Board is committed to relating with you. Informative and interactive conferences, such as our upcoming Fall Floodplain Institute in Asheville and our Annual Conference, are one avenue to bring you up-to-date information and provide an opportunity for you to share your concerns. We need your participation, presentations, and suggestions to keep this avenue of communication effective. Our partnership with NCEM and NFIP provides an interactive means of information, problem solving, and personalized assistance when needed. We will continue to strengthen this relationship. ASFPM provides another opportunity for timely issues and interactive education. **Bill Tingle**, our Executive Director, sits on a national committee and various Board members and regular members participate in national conferences (see **Cynthia Fox Barcklow's** write up in this issue).

Please share your suggestions, expertise, and time with us as we continue to keep NCAFPM valuable to you and hence to all of our citizens through the vital tasks that you do.

Thanks again and hope to see you in Asheville in October and/or Wrightsville Beach next spring.

John

Getting the Word out...

STEPHEN SMITH, CFM

What is social media? Social media is defined as forms of electronic communication through which users create online communities to share information, ideas, personal messages, and other content.

The use of social media in today's professional community continues to grow in popularity. It is being used by schools, businesses, governments, organizations and even political parties to share information with large groups of people. The more popular social networking sites include Facebook, LinkedIn, Twitter, and Google+.

NCAFPM currently uses Facebook and LinkedIn to share information with its members. We also

utilize a listserv hosted by the School of Government at the

University of North Carolina. We encourage our members to join these sites and help us spread the word about our Association. These links can be found on our website www.ncafp.org or click the logos here to go directly to our pages. ▲

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Our 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.

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 e-mail address. ▲

FloodSmart Offers Tools, Resources to Help Communicate Flood Risk

NFIP, FLOODSMART TEAM

With support from FloodSmart, the marketing campaign for the National Flood Insurance Program (NFIP), communities can better communicate the risk of flooding and importance of flood insurance to local residents. Shareable tools and resources easily accessed online from the Flood Smart Community Resources page provide dramatic,

illustrative examples of flood risks and highlight the value and ease of purchasing flood insurance through thousands of insurance agents around the country.

Several tools can be downloaded, shared or posted on community websites. These tools include:

- **Flood Risk Scenarios** — This downloadable tool illustrates common causes of flooding through animated scenarios. After downloading onto a community's site, visitors can click on a scenario to see examples of how and why it can flood.
- **Cost of Flooding** — This shareable tool shows that all it takes is a few inches of water to cause major damage to a home and its contents. It is an excellent way to illustrate the financial

consequences of a flood and start the conversation for purchasing flood insurance.

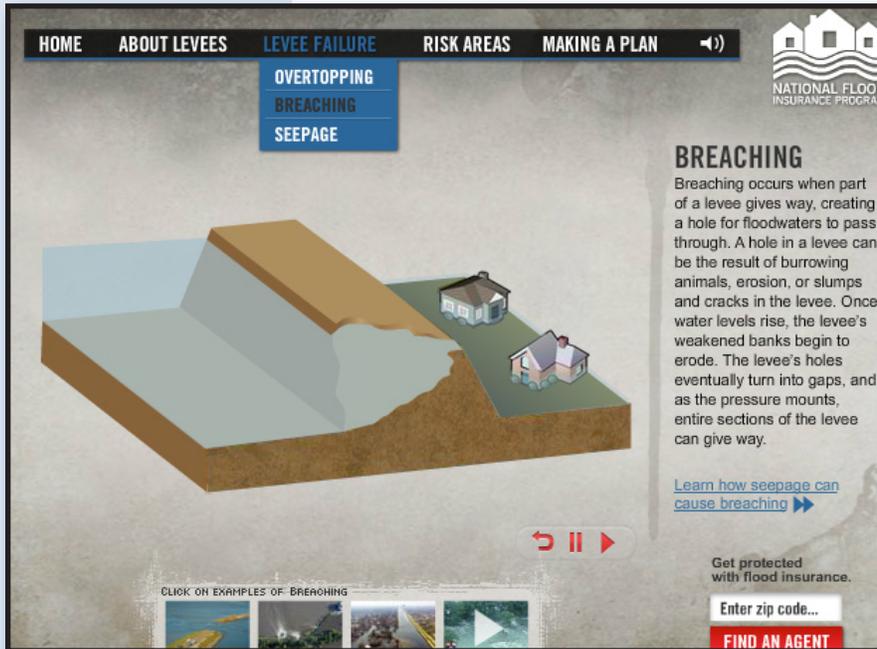
- **Widgets** — During the year, FloodSmart creates and updates widgets that can be downloaded and used as an interactive way to

illustrate the risks of flooding. Widgets have been created for a variety of seasons and topics, including winter flooding, hurricane season and flood-after-fire.

- **Levee Simulator** — This downloadable educational tool helps explain in simple terms how levees work and the risk of living or working behind a levee. Using illustrated scenarios, users can see different ways that a levee can be breached or overtopped and offers tips on how property owners can mitigate against damage.
- **Testimonials** — Online videos from people who have experienced flooding provide compelling, first-hand accounts of the consequences of flooding. These testimonials describe floods that occurred in different parts of the nation from a number of sources, including coastal storms and levee breaches. They include home and business owners who did and did not have flood insurance. Add links to those relevant to your area today.

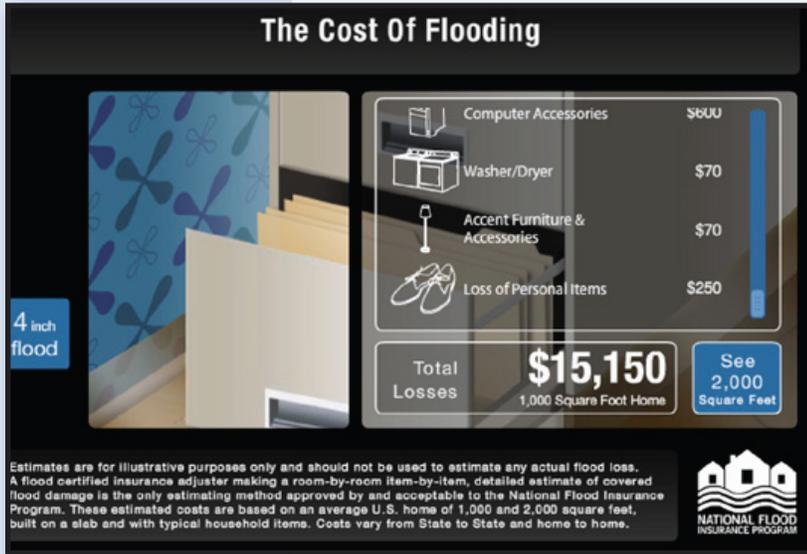
Toolkits and Opportunities for Targeted Communities

FloodSmart has developed a series of toolkits that community officials can use to promote flood insurance, assist in communicating the changes in flood risk due to map



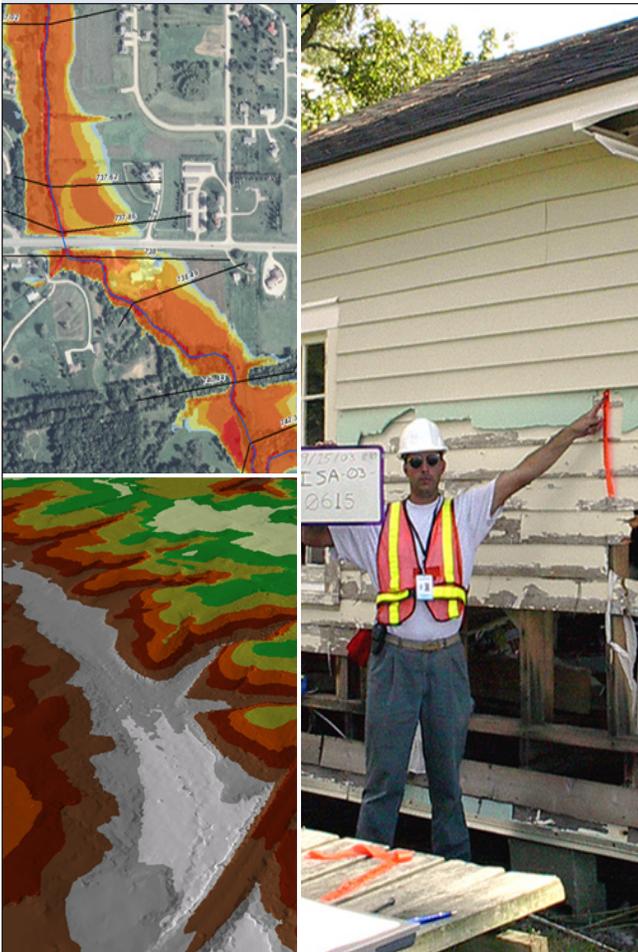
FloodSmart, from page 3

changes and address levee issues. The mapping and levee toolkits contain templated outreach materials and letters designed for communities to customize and use in local outreach. The toolkits are available for immediate use at FloodSmart.gov/toolkits.



FloodSmart is also developing pilot programs featuring additional agent, stakeholder and consumer engagement activities in several communities, primarily in the Southeast. The communities are being selected based on flood history and on the willingness of state and local leaders to join FloodSmart in concerted efforts to communicate about flood risks and the need for flood insurance protection.

To learn more about this new effort—or for help on downloading resources to your website—contact FloodSmart at info@femafloodsmart.com. ▲



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PRP Eligibility Extension Extended

BRUCE BENDER & GARY HEINRICH, ASFPM INSURANCE COMMITTEE CO-CHAIRS

On August 21, 2012 FEMA released a Bulletin that announced the extension of the 2-year Preferred Risk Policy (PRP) Eligibility Extension for buildings newly mapped into a high-risk area (the Special Flood Hazard Area, SFHA).

Under the initial 2-Year PRP Eligibility Extension, buildings newly mapped into a SFHA on or after October 1, 2008, became eligible for the PRP for 2 years beginning on January 1, 2011. Buildings newly mapped into a SFHA on or after January 1, 2011, were also eligible for the PRP during the 2-year period following the map revision date. At the end of the 2-year period, the policies were required to be rewritten as standard-rated policies (aka grandfathered).

As FEMA continues to develop an implementation strategy for the Biggert-Waters Insurance Reform Act of 2012, policies issued under this PRP Eligibility Extension (and that meet the loss history requirements) will continue to be issued as PRPs at each renewal until further notice and do not need to be rated as standard-rated policies. This also applies to new businesses.

For a copy of the NFIP Bulletin, go to http://www.nfipiservice.com/bulletin_2012.html and click on Bulletin W-12054. ▲

Sea Level Rise Accelerating in U.S. Atlantic Coast

Rates of sea level rise are increasing three-to-four times faster along portions of the U.S. Atlantic Coast than globally, according to a new U.S. Geological Survey report published in *Nature Climate Change*.

Since about 1990, sea-level rise in the 600-mile stretch of coastal zone from Cape Hatteras, N.C. to north of Boston, Mass. — coined a “hotspot” by scientists — has increased 2 - 3.7 millimeters per year; the global increase over the same period was 0.6 – 1.0 millimeter per year.

“Many people mistakenly think that the rate of sea level rise is the same everywhere as glaciers and ice caps melt, increasing the volume of ocean water, but other effects can be as large or larger than the so-called ‘eustatic’ rise,” said USGS Director Marcia McNutt. “As demonstrated in this study, regional oceanographic contributions must be taken into account in planning for what happens to coastal property.”

Though global sea level has been projected to rise roughly two-to-three feet or more by the end of the 21st century, it will not climb at the same rate at every location. Differences in land movements, strength of ocean currents, water temperatures, and salinity can cause regional and local highs and lows in sea level.

“Cities in the hotspot, like Norfolk, New York, and Boston already experience damaging floods during relatively low intensity storms,” said Dr. Asbury (Abby) Sallenger, USGS oceanographer and project lead. “Ongoing accelerated sea level rise in the hotspot will make coastal cities and surrounding areas increasingly vulnerable to flooding by adding to the height that storm surge and breaking waves reach on the coast.”

The report, “Hotspot of accelerated sea-level rise on the Atlantic coast of North America,” was published in the journal *Nature Climate Change*. ▲

USGS Press Release
6/24/2012

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ASFPM National Conference Report

BY CYNTHIA FOX BARCKLOW, NCAFPM VICE CHAIR



*Robert Billings, Sara Easter, and
Cynthia Barcklow in front of the
Alamo in San Antonio.*

The 36th annual Association of State Floodplain Managers (ASFPM) Conference was held in San Antonio, Texas, May 20-25, 2012. The theme of the conference was “Mission Mitigation,” reflecting the history of the Catholic missions established along the San Antonio River in the 1700s. The record was broken this year for the most attendees at the ASFPM conference, with 1,200 persons registering from across the United States, 42 of whom were from North Carolina. Things are bigger in Texas, so the large attendance was no surprise.

I arrived on Saturday afternoon and met a few of our cohorts from North Carolina for a riverboat cruise and tour of the Alamo.

Training workshops began on Sunday and conference field trips were offered. Throughout the day there were 15-minute long orientation sessions for “first timers” where the conference format was explained and questions answered. On Sunday evening, there was a Welcome Fest, complete with Tex-Mex food and drink, costumed dancers and a Mariachi band.

National policy issue discussions were held on Monday and Exhibits were opened. Several of the exhibitors were familiar to me from our state conference. I have always enjoyed the social time and opportunities to ask questions one on one. Small lobster stickers began showing up on conference nametags — advertisements for next year’s national conference to be held in Hartford, Connecticut, June 9-14, 2013.

At the Plenary session on Tuesday, much of the discussion centered on community resiliency and design, as well as sustainability. These concepts are extremely interesting to Planners. There was discussion related to what was referred to as “the Low-Impact Development (LID) challenge,” cautioning community officials to be mindful of local ordinances which may inadvertently create a more complex and time extensive review for projects incorporating LID components — those same criteria that communities wish to encourage. Steve Graham with the San Antonio River Authority discussed the triple bottom line related to their sustainability plan, including economic, quality of life, and environmental factors, and how there is value associated with each even though some are not monetized. Mr. Graham said that their plan reflects these values and that “these are not just San Antonio River Authority’s values; they are the community’s values.” Later in the week, I was not surprised when the River Authority received an award from ASFPM.

I had a tough choice to make for the next concurrent session: **John Dorman’s** presentation on Integrated Hazard Risk Management (IHRM) or **Ken Ashe’s** presentation on

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Floodplain Managers
Board of Directors
2012-2013**

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National Conference, from page 6

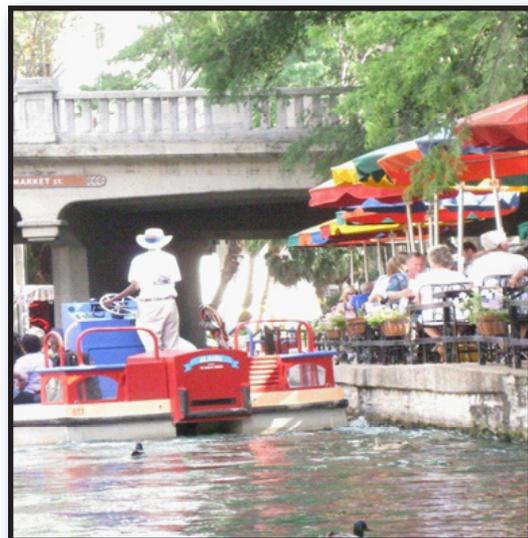
Mobile Technology Tools. I decided to attend the session with **John Dorman**, as the other speakers' topics in the session were also very interesting to me, specifically Gavin Smith's "Planning for Post-Disaster Recovery." The session was an hour and a half, with four speakers. John was third in the line-up following a speaker from FEMA and a Recovery and Development Director from Wisconsin. John's slides were clear and meaningful. There were slides showing the typical FEMA map panels, the building footprint and first floor elevation data that is being gathered, and mobile LiDAR data. An awesome feature of the IHRM program is the ability to assign a probability of hazard and estimated financial loss on a parcel level.

John said that significant cost savings have been realized with North Carolina's decision to go "all-digital" and stop automatically printing floodplain maps and he recognized the philosophical and financial commitment of the North Carolina legislature following Hurricane Floyd to invest in floodplain mapping and risk reduction. Gavin Smith's presentation followed, and yes, I do intend to buy the book. Our NC presenters made us proud.

On Tuesday evening, the Exhibitors Social was held after the concurrent sessions, followed by a cookout at La Villita. We walked along the Riverwalk to access La Villita, part of the oldest neighborhood in San Antonio. A band played inside, with optional karaoke, and there was a beautiful open area outside for us to congregate.

Wednesday sessions were well attended, so much so that people began arriving ten minutes ahead of scheduled sessions in order to get a seat. The silent auction to benefit ASFPM closed on Wednesday afternoon and my \$10 bid on the NCAFPD donation — a gift basket from Southern Season — was not good enough to close the deal. I did hear that another conference record was broken for the largest bid received for a donated item (\$4,000) for ESP's donation: a trip for two to the Superbowl. Incredible!

Early Thursday morning, the Regional Discussion Sessions were held. Present for Region 4 were representatives from various states, with **Bill Tingle**, **John Fullerton**, **Ernest Odei-Larbi**, and me representing North Carolina. Introductions were made, and ideas/concerns were discussed. A regional means of communication was discussed, as in a listserv, blog, or other immediate electronic vehicle. Florida representatives discussed the requirement for projects to address the proposed impact on endangered species. **John Fullerton** organized a lunch meeting between the NCAFPD Board members in attendance and the newly formed Tennessee chapter to discuss shared opportunities for training. The most interesting tidbit I learned was that there is a floodplain management degree offered through Western Kentucky University, the only college that currently offers this degree.





Call for Presenters

The 2013 ASFPM Conference will examine the challenges facing the nation as flood loss reduction experts share ideas and learn from one another.

This Call for Presenters seeks a broad range of professionals to address the many issues and problems associated with managing flood risk, reducing flood damages, making communities more sustainable, and protecting floodplains and fragile natural resources.

In addition to CONCURRENT SESSION Presentations, ASFPM is also accepting proposals for a limited number of 2- and 4-hour TRAINING WORKSHOPS.

The CALL FOR PRESENTERS can be downloaded from www.floods.org/Conference/ASFPM_2013_Call.pdf. Abstracts and bios must be received by the Program Chair by October 31.

Other information can be found on the ASFPM Annual Conference webpage at www.floods.org.

National Conference, from page 7

At the Plenary Session on Thursday, ASFPM Executive Director Larry Larson spoke about the role of Land Use Planning in community resilience. He said that communities must absorb, tolerate or mitigate to be resilient. He also said that in order to be resilient, communities must maintain and restore at the same time. He quoted a law professor, Lisa Grow Sun, who said, "Smart growth in dumb places is the opposite of sustainability." Mr. Larson is a dynamic speaker, untraditional in dress and demeanor. Later at the Awards Luncheon, he was recognized for his contributions and more information was shared about his career. My favorite memory of what was said about him was that at conferences or hearings in which he attends as part of a group, he makes group members spread out to attend different sessions so nothing is missed. During the Awards Luncheon, the torch (and electric blue blazer) was passed to Chad Berginnis to continue as ASFPM's Executive Director.

Closing out the conference experience was the evening at Knibbe Ranch. Motor coaches met us outside the conference hotel, and drove us to the nearby ranch in style. At the ranch there were tables of food, and activities included line dancing, music by yet another talented band, longhorn steers, armadillo racing, spirited beanbag toss, and horseshoes. After we ate and before we reloaded on the motor coaches, many of us "moseyed" to the creek that we saw in the distance — a fitting end to my first national floodplain conference. ▲



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The Flood Risk Information System (FRIS)

BY RANDY MUNDT, AICP, CFM
OFFICE OF GEOSPATIAL AND TECHNOLOGY MANAGEMENT

As the North Carolina Floodplain Mapping Program (NCFMP) moves towards the digital, point-and-click future to access and display flood risk information, we have created a website which will be available in the next couple months that will disseminate a broader variety of data in new ways. The website, Flood Risk Information System (FRIS) — <http://iriskpilot.urscorp.com/FRIS/Home.aspx>, will contain digitally accessible flood hazard and risk data that is database driven, allowing for print-on-demand products such as flood maps and Flood Insurance Studies (FIS), and data will be available for both effective and newly released Preliminary Data. New data features include the footprints for all structures greater than 800 square feet, engineering models by stream reach, FIRMettes that are dynamic/pan-able, as well as various flood mitigation options to consider (along with the estimated costs and cost-effectiveness for those options). The website will also allow downloading for geospatial base map data, imagery, LiDAR data (topographic data), along with hydraulic and hydrologic models that will be available for download and use.

The FRIS website presents information targeted to two audiences: the general public and the advanced users. Through a variety of FRIS tabs the general public can identify the level of flood risk and estimated damage losses associated with their property. By typing in their address, users can access information such as the flooding source, the flood event water surface elevations for different recurrence intervals, the flood zone, and whether the structure is situated within a floodway. Advanced users, such as floodplain managers and government officials, will have the opportunity to download flood hazard data while also being able to identify different recurrence intervals of flood risk for buildings in the community, and a flood risk management plan can be developed through the FRIS. Selecting from the FRIS toolbar, a user can select the type of map, add layers to the map, add a map legend, measure distances, and identify flood hazard features such as flood zones, cross sections, panel numbers, hydraulic structures, and major roads.

Within the FRIS are several tabs that can provide different categories of more detailed information. A *Flood Information* tab provides the flooding source, base flood elevation, flood zone, county, political area, panel number, and effective date for the property address entered by a user. If a user clicks on a specific structure, the parcel ID and the intersecting flood zone are also provided. A *Risk Information* tab can then provide property-specific information such as the building's value, number of stories, square footage, and foundation type, **derived from both field-collected and local tax office sources**. The tab will also provide a property's percent annual chance of flooding in any given year, depth of flooding and the estimated losses associated with each flood event scenario. A *Financial Vulnerability* tab allows a user to calculate personal vulnerability, which allows a user to enter the amount of flood insurance coverage on the structure, their annual income, and other assets they can apply to cover losses. Using the building's value and estimated relocation and contents costs, FRIS calculates flood losses and estimates the impact to a user's finances. A *Map Export* tab allows a user to choose the map template and the paper size of the print-on-demand flood map that can be created for the property researched by

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a user. Finally, a *Data Export* tab allows the user to extract and download imagery, state and county data, and the current effective FIRM PDF map panel for the location of the property address entered.

The first phase of the FRIS website will load North Carolina's eastern river basins, with more than 50 counties' effective FIS and FIRMs. As more counties are released with new preliminary flood risk data, the FRIS will be updated to include the new, fuller range of data, too. As this digital format is a departure from the traditional hard-copy format for release and viewing, the NCFMP will engage in a considerable outreach effort over 2013, with workshops and trainings to help educate stakeholders on how to access and use this more powerful platform of flood risk data display. ▲

GTM's Role in State Clearinghouse Reviews

BY JOHN D. BRUBAKER, PE, CFM
NC DEPARTMENT OF PUBLIC SAFETY, NC FLOODPLAIN MAPPING PROGRAM

The North Carolina State Environmental Review Clearinghouse, under the Department of Administration, coordinates environmental reviews with various agencies for projects involving public funds, state lands, projects requiring a state approval action, or projects with a potential for environmental impact. The North Carolina Department of Public Safety, Emergency Management Division, Office of Geospatial and Technology Management (GTM) is tasked with reviewing all projects for compliance with floodplain regulations under NC Executive Order 123.

GTM analyzes these projects for development in the Special Flood Hazard Area (SFHA). Critical facilities are checked to the 0.2% annual-chance flood hazard area. Impacts are also checked within floodways or non-encroachment areas (NEA). If there are no project elements within these areas, GTM will generally reply with "No Comment." If there are elements in these areas, GTM will review the documentation.

During the document review, GTM will check to make sure the elements in the SFHA are recognized:

- Is the location of the entire development clearly shown, preferably on the appropriate Flood Insurance Rate Map (FIRM)?
- Is all development in the SFHA clearly identified with the FIRM Panel Number, flooding source, governing jurisdiction, and floodway/NEA impact?
- Are impacts, such as structures, fill, and clearing, in the SFHA identified?
- Is mitigation, such as floodproofing or elevating structures or underground directional boring across a floodway, outlined in the document?
- Are No-Rise or Map Revision requirements included?
- Does the document list the permitting required for the floodplain development?

Most projects within an SFHA in an NFIP participating community require permitting from that community, even if there are no "impacts" to the SFHA. NCDOT highway and railroad bridge replacement projects do not require local permitting, but are coordinated through the Memorandum of Agreement with GTM. Mecklenburg County, who has their own floodplain mapping program, is notified by GTM of projects in their jurisdiction.

For projects involving federal funding in the SFHA, an eight-step decision-making process needs to be included in the documentation. These steps include:

1. Determine if a proposed action is in the SFHA.

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2. Conduct early public review, including public notice.
3. Identify and evaluate practicable alternatives to locating in the SFHA.
4. Identify impacts of the proposed action.
5. If impacts cannot be avoided, develop measures to minimize the impacts and restore and preserve the floodplain, as appropriate.
6. Reevaluate alternatives.
7. Present the findings and a public explanation.
8. Implement the action

If a community or agency intends to use public funds for restoration of an historic structure in the SFHA, there are several points that need to be included in the documentation:

- The structure must be:
 - Listed individually in the National Register of Historic Places;
 - Preliminarily determined to meet the requirements for individual listing;
 - Contributing to a registered historic district; or
 - Listed individually in a state or local certified historic preservation program.
- The structure cannot lose its Historic Designation as a result of the proposed changes;
- The structure should be protected to the maximum extent practical;
- The structure must meet all other floodplain development requirements;
- Improvements to the structure will require a variance by the local community.

FEMA publication P-467-2 outlines considerations for historic structures in the SFHA

If the project covers utility expansion or repair in the SFHA, the project documents need to note that new and substantially improved structures must be reasonably safe from flooding. The utilities must be designed and built in order to minimize infiltration and discharge from public water and sewer systems. Facilities must be elevated or flood-proofed as appropriate. Even if a utility is underground, review and permitting by the local authority is still required.

Finally, GTM will also confirm whether the community participates in the NFIP. Non-participating communities are not eligible for most federal funding for development in the SFHA.

Answers to other questions regarding the North Carolina State Environmental Review Clearinghouse can be found at their web site: www.doa.nc.gov/clearing/default.aspx. Specific questions regarding SFHA impacts should be directed to John Gerber or Dan Brubaker at GTM. ▲

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NC GTMO Welcomes the Transfer of NCGS into its Office

The North Carolina Geospatial and Technology Management Office (GTMO) welcomes the transfer of a key working partner agency, the North Carolina Geodetic Survey (NCGS), into its office. NCGS is responsible for the establishment and maintenance of the state's official survey base and is the lead state agency responsible for the coordination of geodetic and other surveying activities among state agencies.

NCGS was previously in the Division of Land Resources/NC Department of Natural Resources (NCDENR) and was transferred to the Division of Emergency Management (NCEM)/NC Department of Public Safety (NCDPS) with the passage of the 2012 State Budget [Section 12.4.(a) of House Bill 950] (<http://www.ncleg.net/Sessions/2011/Bills/House/PDF/H950v7.pdf>).

NCGS and its staff have had a long, mutually beneficial working history with GTMO and its staff. Although NCGS was originally placed in NCDENR's predecessor department, the Department of Conservation and Development, in 1960, NCGS was transferred in 1996 to the Office of State Planning (OSPL), which had GTMO's director, John Dorman, as its director at that time. In addition, the current NCGS chief, Gary Thompson, had recently been promoted to be the agency's chief in 1994.

Three years after the agency was transferred to OSPL, Hurricane Floyd dropped 21 inches of rain upon eastern North Carolina and damaged thousands of homes on land that had not been designated as flood prone on FEMA's Flood Insurance Rate Maps (FIRMs). It was also discovered that 55% of North Carolina's FIRMs were at least 10 years old and that FEMA could only update these outdated FIRMs at a plodding rate of one county per year.

When the question was asked how these outdated FIRMs could be updated expeditiously, OSPL and NCGS worked in concert with FEMA to develop a state-of-the-art solution. What resulted was the creation of the NC Floodplain Mapping Program (NCFMP) with John Dorman as its director and a mutually beneficial partnership between NCGS and NCFMP with NCGS doing the quality control (QC) on the contracted survey firms conducting QC work on the floodplain mapping LIDAR data. Although NCGS was later transferred back to NCDENR in 2001, NCGS and NCFMP continued their working partnership over the years.

In addition to providing QC work, NCGS also provides the following other services:

- Geodetic control, maps, and tools
 - Geodetic control databases: NCGS and the National Geodetic Survey (NGS)
 - Electronic Distance Measurement (EDM) instrument calibration baselines
 - Geodetic control maps
 - Online statewide stations map tied to the NCGS database
 - County maps (download and online viewing)
 - Geodetic Toolkit
- Global Navigation Satellite System (GNSS) base station files
 - Real Time Network (RTN) for GPS machine control (i.e. precision agriculture and earth moving equipment), aerial and ground-based LIDAR mapping, and surveying and mapping
 - FTP download for post-processing of surveying and mapping projects
- County & State Boundary Program

For more information on NCGS, visit the NCGS web site (www.ncgs.state.nc.us). ▲

Highlights

Biggert-Waters Flood Insurance Reform Act of 2012

On July 6, 2012, the President signed into law the Surface Transportation Bill (H.R. 4348), which included the Biggert-Waters Flood Insurance Reform Act. The Act re-authorizes the National Flood Insurance Program (NFIP) through 2017 and includes numerous changes to the NFIP. The most significant changes are described here.

Flood Insurance

Removes subsidized rates (pre-FIRM rates) for the following classes of structures and allows rates to increase by 25% per year until actuarial rates are achieved: The effective date is July 1, 2012.

- Any residential property that is not the primary residence of an individual
- Any severe repetitive loss property
- Any property that has incurred flood related damages that cumulatively exceed the fair market value of the property
- Any business property
- Any property that after the date of the Bill has incurred substantial damage or has experienced “substantial improvement exceeding 30 percent of the fair market value of the property.”
- Any new policy or lapsed policy, or any policy for a newly purchased property.
- Any policy for which the owner has refused a FEMA mitigation offer under HMGP, or for a repetitive loss property or severe

repetitive loss property.

- Severe Repetitive Loss means four or more claims payments of over \$5,000 or two claims that exceed the value of the property.

Increases the limit for annual rate increases within any risk classification of structures from 10 percent to 20 percent. Effective date is July 1, 2012.

Defines Severe Repetitive Loss properties for single family residences as 4 or more claims, each for more than \$5,000 and cumulatively more than \$20,000. For multi-family residences, the Director may provide a definition by regulation.

Allows for premium payments - either annually or in more frequent installments.

Places limits on a bank's force placement of flood insurance. Forced placed insurance would be cancelled and the premiums refunded upon proof of a borrower's existing flood insurance coverage.

When flood maps change, a property that has higher rates as a result of a new map shall have the new rates phased in over a five-year period at 20% per year. Premium rate adjustments due to map changes take effect on the effective date of the new map.

Lender penalties for non-compliance with mandatory flood insurance purchase requirements is increased from \$350 to \$2000 per violation, and the limit of fines for any lending institution over a calendar year is removed. It was \$100,000.

Minimum annual deductibles on claims are changed to \$1500 for cover-

age up to \$100,000 and \$2000 for coverage over \$100,000 for pre-FIRM properties, and \$1,000 and \$1,250 for below and above \$100,000 coverage for post-FIRM properties.

Rates must be set to cover the average historical loss year, including catastrophic loss years, in accordance with generally accepted actuarial principles. (That would also increase rates since the increase in flood damages has meant that rates do not cover the historical average loss year.)

Requires FEMA to establish a National Flood Insurance Reserve Fund of at least one percent of the total potential loss exposure. This fund would be built by 7.5% of the reserve ratio required each year. Allows FEMA to report to Congress if such goals cannot be met and to explain the reasons.

Requires a ten-year repayment plan for the current insurance fund debt and also requires a report and repayment plan whenever FEMA has to borrow funds to pay NFIP claims.

Mitigation Programs

Consolidates NFIP funded mitigation programs (Repetitive Flood Claims, Severe Repetitive Loss Properties, Flood Mitigation Assistance) into a single program. The combined National Flood Mitigation Fund is to be funded at \$90 million per year. (While the old Flood Mitigation Assistance and pilot Severe Repetitive Loss program were funded at up to \$40 million per year each and the Repetitive Flood Claims program at up to \$10 million, the SRL program has never been fully utilized in part due to its complexity.)

The new program simplifies and combines the three previous programs and

— New Flood Regulations —

Biggert-Waters, from page 13

includes the following:

- Allows the required Flood Mitigation Plan to be part of a community's multi-hazard mitigation plan.
- Removes beach nourishment as an allowed mitigation activity.
- Adds elevation, relocation, or floodproofing of utilities, as allowed mitigation activities.
- Adds demolition and rebuild as an allowed mitigation activity.
- Specifically notes the capacity for "direct" grants if the Administrator, after consulting with the State and community, determines that neither has the capacity to manage the mitigation grant.
- Caps the use of mitigation grant funds for state mitigation plan development at \$50,000 and at \$25,000 for a community.
- Provides for denial of grant funds if not obligated (paid out) in 5 years. (This is due to Congressional concern about unobligated balances.) Specifically restates 2004 Reform bill provision prohibiting offsetting collections to fund these mitigation programs.
- Restructures federal share requirement:
 - Up to 100% for severe repetitive loss structures. (4+ Claims of over \$5000 or 2+ claims exceeding value of structure)
 - Up to 90% for repetitive loss structures. (2 claims over 10 years averaging at least 25% of value of structure)
 - Up to 75% for other approved mitigation activities.

Mapping

Establishes a **Technical Mapping Advisory Council** with membership coming from a wide range of professions, including federal agencies and

state and local mapping partners.

The Council would advise FEMA on improving accuracy, on standards that should be adopted for flood maps, data and map maintenance, and on funding needs and strategy. It would also develop recommendations within 1 year for future conditions mapping, including impacts of sea level rise and future development on flood risk. FEMA is *required* to incorporate such recommendations into the ongoing review and updating of flood maps.

Establishes an on-going National Flood Mapping Program. Requires that flood maps show 100-year and 500-year floodplains for all populated areas and areas of possible population growth, as well as areas with residual risk behind levees or below dams. Also requires mapping of the level of protection provided by flood control structures. Requires that new flood maps use the most accurate topography and elevation data available. Also requires acquisition of new ground elevation data when necessary. Requires development of flood data on a watershed basis.

Requires FEMA to notify property owners when their properties are included in, or are removed from, an area covered by mandatory insurance purchase requirements. Also requires notification of Senators and House Members whose States or Districts are affected by map changes.

There is an authorization of \$400,000,000 for flood mapping per year for fiscal years 2013 – 2017. (This is an authorization level – not to be confused with actual annual appropriations.)

Formalizes a Scientific Resolution Panel to arbitrate when a community has received an unsatisfactory ruling with respect to an appeal of a revised

flood insurance rate map. Appeals must be based on technical or scientific data.

Removes limitations on state contributions to updated flood mapping. (Previously, there was a limit of a 50% state contribution to the costs of new flood maps. This has resulted in some states in states developing mapping data but FEMA being unable to use it to produce new maps.)

Requires a study on federal interagency coordination of flood mapping, including collection and utilization of data among all governmental users.

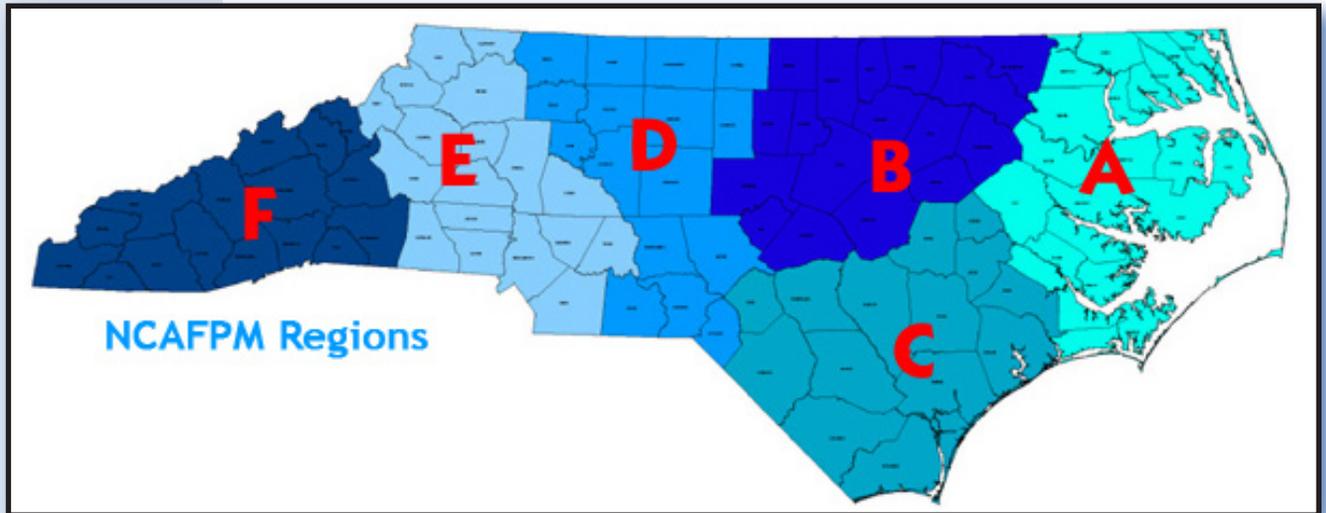
Levees

Establishes a Flood Protection Structure Accreditation Task Force in cooperation with the Corps of Engineers. The Task Force is charged with better aligning the information collected by the Corps of Engineers' Inspection of Completed Works Program with FEMA's flood protection structure accreditation requirements.

Allows for flood insurance premiums to reflect premiums in fully protected areas in communities that are deemed to have made adequate progress in the reconstruction or improvement of a flood protection system. ▲

For an analysis on "How the Flood Insurance Reform Act of 2012 (H.R. 4348) May Affect State and Local Adaptation Efforts" by Jessica Grannis, go to www.georgetownclimate.org/how-the-new-flood-insurance-reauthorization-and-reform-law-could-impact-adaptation-planning.

NCAFPM Regional Reports



Region B

Randy Mundt,
AICP, CFM

On August 25, a severe storm rolled through the area of Halifax and Northampton, flooding dozens of roads and homes in Roanoke Rapids, Gaston, Weldon and other areas in the two counties. Up to 11.5 inches of rain fell in four hours, swamping Interstate 95 and flooding about 80 homes and businesses and sent more than 50 residents to one of two local shelters. On September 5, Gov. Bev Perdue announced that financial assistance will be available for survivors of the flash flooding through a disaster declaration by the U.S. Small Business Administration and the State Individual Assistance program. As of September 12, over 150 individuals have requested assistance from damages sustained from this event. Pictures and other information can be seen at www.wral.com/news/local/story/11471441/.

There has been some good progress on mitigation activities in Wake County: the Milner Inn on Capital Blvd. in Raleigh — which has regularly flooded — is using PDM-repetitive flood claims funding to purchase and remove, as is the Grove Park Apartments (also in Raleigh), and another single-family dwelling. Edgecombe County also has completed an acquisition/removal for a single-family dwelling.

Region C

Tony Wilson, CFM

Hello to all my Region C Members.

Regulating enclosed areas below elevated buildings is a constant battle in the Town of Wrightsville Beach, and I'm sure in your community as well. In an effort to help fight this battle, our community will be considering updating our Flood Plain Ordinances by adding a Non-Conversion Agreement for structures in the floodplain. This is only one of many ways to strengthen your local Flood Plain Ordinances.

Maureen O'Shea, NC NFIP coordinator instructed a class on "Floodplain Variances" for BOA members of Brunswick and New Hanover counties. Over 30 people attended the session held in Leland on September 25th at the town offices.

I would like to thank everyone in Region C for allowing me to serve you for another term as your Regional Representative. If there is anything I can do for you, please do not hesitate to e-mail me at twilson@towb.org. Thank you and I look forward to serving NCAFPM in this upcoming year.

Region D

Drew Blackwell,
CFM

Greetings from Region D! There are a couple projects underway in Region D under the North Carolina Floodplain Mapping Program's (NCFPM) FY10 Map Maintenance. Guilford County will receive updates to existing modeling and mapping with over 300 miles of new detail study. The updates are being done in two sectors. The initial modeling has been conducted for studies in Guilford County and are currently under review with NCFPM. Studies in the city of Greensboro are still under development.

Stokes County also has some updates that are in the works. Also as part of FY10 Map Maintenance initiative, Crooked Run Creek and Danbury Creek in Stokes County, will receive a combined two miles of new detailed study.

For more information on the NCFPM Map Maintenance Program, visit www.ncfloodmaps.com/.

FEMA Region IV issued a news release in July, announcing that nearly \$4.6 Million to North Carolina to update Flood Maps and Flood Risk Data. Many of the areas to receive updates are in Region D. For more information visit <http://tiny.cc/f86vkw>

Region F

Brad L. Burton,
CFM

Howdy to everyone from the "pointy" end of the state!

How many of you folks out there do nothing but floodplain management for their entire shift? Aaah, to really have a finger on the pulse of what's going on in your floodplain areas would be quite an accomplishment and such a concept truly intrigues me.

As I alluded above, our office is small and we all wear many hats and while I have a good idea of what is happening in my SFHA's, I sometimes feel like I have on boxing gloves while trying to take the pulse of my flood areas. There's always something "else" we are focused on, right?

Even more often, I feel like the floodplain manager fireman, especially when it comes to dealing with violations. All is well, and then the bells start a' ringing and off we go to a fully-involved floodway fill area, or a 4-alarm improperly vented residential structure. Why do people continue to do such things? I am convinced it's because they, in many cases, don't know any better. Whose fault is this? Ours? No way! I mean, my FDPO and the CFR's are really clear, aren't they?

Ignorantia legis neminem excusat, Perry Mason would argue. Ignorance of the law excuses no man. I disagree in this case. FDPO's are technical in nature, use lofty technical and engineering jargon, full of silly acronyms and are just really hard to read, in many cases.

I've run out of gas in BFE before...

It's on us, the Floodplain Managers, to educate our citizens on why all of this is important and make these education endeavors continuous to be effective.

Once again this year it's time for the CRS 330 community outreach (yep, we're in and you should be, too) and once again I have forgotten to budget for all of the paper, toner, envelopes and postage this 862-piece mailer is going to take. Somebody's gonna get onto us for it, trust me. But it is a good thing and very important—I receive a bunch of calls for info once the flyers "hit" in the community. All of it is usually very positive and appreciative.

I challenge us all to keep the education wicks turned up and the light shining on proper floodplain management for more often than just once a year. It will make a huge difference in the long run.

'Hope to see everyone at the Fall Conference at the Doubletree in Asheville! —Brad



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.

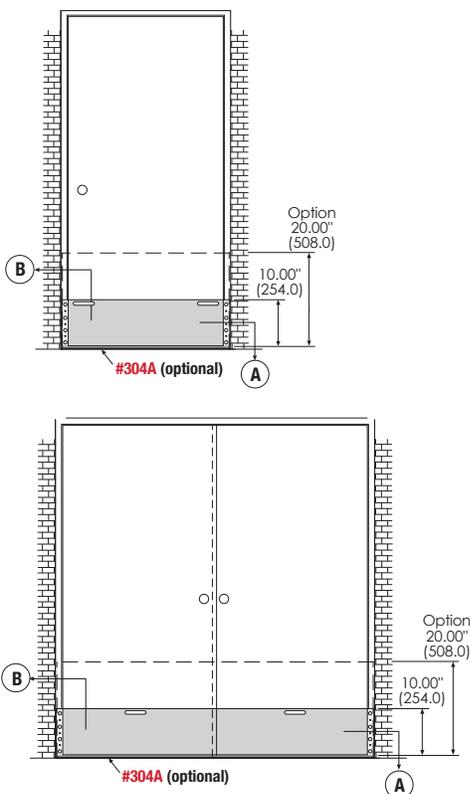
The unit complies with guidelines of the Federal Emergency Management Agency (FEMA) and Federal Insurance Administration (FIA) for use on doors in flood-prone areas.

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.

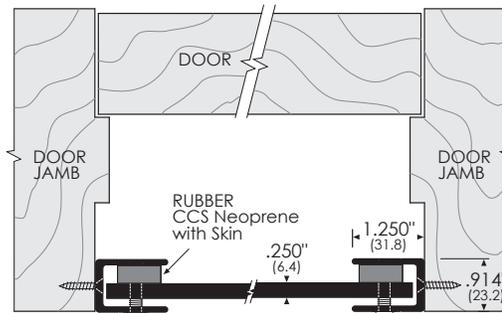


- Part# 2070A - 10 10" High**
- 2070A - 20 20" High**
- 2070A - 24 24" High**
- 2070A - 30 30" High**
- 2070A - 36 36" High**

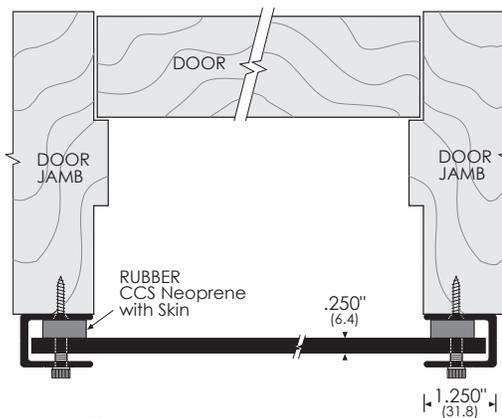
Each Flood Barrier Shield is custom fabricated
 Specify exact width needed and installation option required.



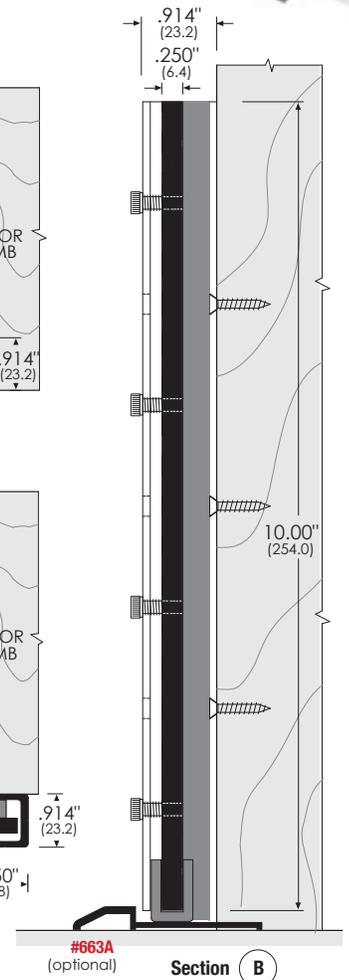
Full illustrations not to scale



Section A Installation option 1 - INSIDE MOUNT



Section A Installation option 2 - OUTSIDE MOUNT



Section B

Conferences & Annual Meetings



NCAFPM ANNUAL CONFERENCE

2013 NCAFPM Annual Conference

Holiday Inn Resort, Wrightsville Beach • April 28-May 1, 2013

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. Program and Conference Chairs are yet to be selected but our dates and rates are secure and ready for you to save on your calendars. Your conference ideas are always welcome and the conference committee(s) will be striving to make this a successful and rewarding event for you. This may be the time for you to share a presentation and benefit yourself and your colleagues.



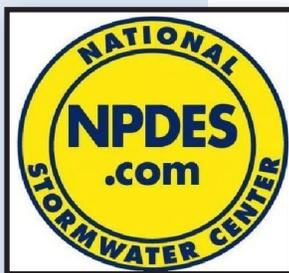
2013 ASFPM Annual Conference

**Connecticut Convention Center, Hartford, CT
June 9-14, 2013**

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.

See Vice-Chair Cynthia Fox Barcklow's recount of the 2012 conference on page 6, and information about presentation submittals for the 2013 conference on page 7.



Region 4 Stormwater Compliance Conference **Panama City Beach, FL • November 13-15, 2012**

Join your colleagues at the SECOND annual Region 4 Stormwater Compliance Conference at the Holiday Inn Resort in Panama City Beach, FL on November 13-15, 2012. This year's conference promises to be exciting with presentations by subject matter experts, MS4 Directors, EPA, National Stormwater Center and more! The Certified Stormwater Inspector class will be available as a special pre-conference event. For more information and to register, visit www.npdes.com and click on "Special Events."

Education & Training



Hosted by North Carolina Sedimentation Control Commission, North Carolina Department of Environment and Natural Resources Division of Energy, Mineral and Land Resources Land Quality Section, and the Water Resources Research Institute of The University of North Carolina

Erosion and Sedimentation Control Planning and Design Workshops

Fall 2012 Erosion and Sedimentation Control Planning and Design Workshops:

October 10, 2012 (Registration deadline: Tuesday, October 2)
Swansboro Rotary Civic Center, Swansboro

November 15, 2012 (Registration deadline: Thursday, November 1)
Highland Recreation Center, Hickory

December 4, 2012 (Registration deadline: Tuesday, November 20)
North Carolina Rural Center, Raleigh

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 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 a plan and prevent pollution by sedimentation.

The workshops will focus on considerations for land planning and enhancement of developing watersheds. Techniques will be discussed for channel design, conveyance of runoff, and surface dewatering. Design criteria for erosion control materials will be demonstrated through use of online tools.

For more information and to download a registration brochure please visit: <http://ncsu.edu/wrri/code/events/upcomingevents2.htm>.



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.

Backyard Stream Repair Workshops

Join experts from NCSU and NC Cooperative Extension to learn about causes of streambank erosion and how to use native plants to create a healthy streamside environment. Get hands-on experience in enhancing an eroding streambank using grading, matting, and various native plant types. Attendees will have the opportunity to watch, ask questions, and even plant trees and shrubs to stabilize and beautify a streambank. The shrub and tree roots will help keep the soil in place and the shade will keep the temperature cool for our cold-water loving organisms, like trout! Cost is \$45 - includes lunch and materials.

October 10, 9am-3:30pm
Watauga County Ag Conference Center, Boone

October 24, 9am-3:30pm
Henderson County Extension, Hendersonville

October 25, 9am-3:30pm
Henderson County Extension, Hendersonville

To register for this workshop please go to http://www.bae.ncsu.edu/workshops/stream_repair.php.

Education & Training, from page 19

Workshop offerings by NCSU Research & Extension and NC LID Group

Low Impact Development (FastTrack) Certification Workshops

Introduction to LID & LEED (1.5 days) and Integrating LID, LEED & Policy (1 day)

October 2-4, The Enterprise Center, Winston-Salem, NC

November 14-16, Greenville City Hall, Greenville, NC

December 4-6, NCSU, Raleigh

Permeable Pavement Workshops

NCDENR Division of Water Quality's update of their Permeable Pavement Design Chapter

October 5, The NC Arboretum, Asheville, NC

December 18, Botanical Gardens, Chapel Hill, NC

Workshops are sponsored by NC State University Department of Biological & Agricultural Engineering, NC Cooperative Extension, and NC Dept. of Environment and Natural Resources. For workshop details and to register online, visit www.bae.ncsu.edu/training_and_credit/workshops.php.

EPA's Job Training Program Expands to Include Wastewater and Stormwater

EPA is awarding \$3 million to 15 grantees through the Environmental Workforce Development and Job Training program. The grants will recruit, train and place unemployed individuals in jobs that address environmental challenges in their communities. Managed by EPA's Office of Brownfields and Land Revitalization, the grant program targets economically disadvantaged neighborhoods where environmental cleanups and jobs are often most needed. With support from EPA's Office of Water, this year's grant program has expanded to include training for wastewater treatment plant operations and stormwater management. Seven of the 15 FY12 grant recipients will emphasize wastewater or stormwater above and beyond the required awareness-level introduction to these topics. Some will offer state certifications in wastewater treatment plant operations. Many of this year's winning grantees are already working with local wastewater utilities or other water sector employers to secure placements for their participants. Historically, approximately 71 percent of program graduates have found employment in environmental fields that serve local communities. For more information, visit: <http://www.epa.gov/brownfields/job.htm>, or contact: Leon Latino, latino.leon@epa.gov, (202) 564-1997.

Calendar

October 20-24, 2012

RESTORE AMERICA'S
ESTUARIES NATIONAL
CONFERENCE
Tampa, FL
www.estuaries.org

October 24-26, 2012

FALL FLOODPLAIN
INSTITUTE
Doubletree Biltmore Hotel
Asheville, NC
www.ncafpm.org

November 13-15, 2012

REGION 4 STORMWATER
COMPLIANCE CONFERENCE
Panama City Beach, FL
www.npdes.com

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

Floodplain Management

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

Resources

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

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.

FlashFlood NEWS

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