

Floodplain and Shoreland Management

Notes

National Disaster Resilience Competition Mitigating Flooding's Cost

The cost of disaster relief is “hidden.”

The Washington Post reports that between 2011 and 2013 natural disasters in the United States cost the Federal Government \$136 billion—that’s nearly \$1.3 billion a week or \$400 a year per American household! But these figures remain largely unknown to many Americans.

As it happens, disaster relief funding is not shown as, nor is it part of the annual federal budget. Rather, disaster relief is considered “emergency funding,” and is funded via special bills in Congress, as requested, thereby masking the true year over year cost of reactive disaster relief. The dollar amounts quoted above account for all disaster relief and while not all disaster costs cited above were for flooding, the majority of them were. From 1953 to the first half of 2014, of the nearly 2,200 declared disasters, over 1,300 were for flooding, or about 61% of the total. Not surprisingly, while the percentage of flooding declarations to total natural disasters has remained fairly consistent over the past six decades, (generally between 55% and 70%), the sheer number of flooding disasters has greatly increased from an average of eight per year in the 1950s to 35 during the first half of the 2010s. (Other decennial averages per year: 1960s, 13; 1970s, 24; 1980s, 15; 1990s, 26, and 2000s, 32.) Of course, while there is a greater willingness by the Federal government to declare an event a Federal Disaster, the trend of more frequent flooding disasters seems to be clear.

There will always be a need for recovery monies, but how can we assure that funds

spent are being used to encourage and enhance a community’s resilience to the next flooding event before the disaster? Can we be more than reactive? Can we help communities identify more appropriate solutions? While it may not be possible to fully eliminate the damage caused by flooding, how do we begin to plan and mitigate before it happens?

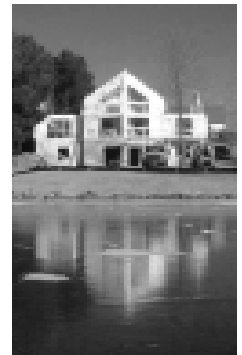
- “Can that home be removed from the flood zone (through relocation or demolition)?”
- “Should that flooded fire station be built back in place or are there measures that can be taken to protect it from the next disaster?”
- “Could that open land be acquired by the community for flood water storage?”

How do we change our recovery behavior to become more resilient to future natural hazards? How do we change the statistics? How do we increase the amount of funding for projects to protect us from the next disaster before it occurs? How do we “flip” the ratio of monies from recovery to mitigation? In the end, how do we increase our resiliency?

As the Association of State Floodplain Managers notes on its Mitigation Page, “successful mitigation is often not well understood because few people notice when a disaster does not happen.” Success in avoiding the flood is not dramatic. The Federal Emergency Management Agency (FEMA) estimates that for every dollar spent on mitigation, four dollars are saved in recovery. Furthermore, the



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pain of disaster does not end with the clean up and recovery. The National Federation of Independent Businesses found that 30 percent of small businesses fail to reopen following a presidentially declared disaster, damaging the community for years to come in lost wages, tax revenue, and “spirit”.

It is far more cost effective to mitigate the potential disaster by removing assets out of harm’s way, physically preventing the flood from reaching residents and property, or by not allowing construction in the floodplain in the first place. But all of these methods (and others) have a cost.

In an effort to build on the mitigation funding efforts of FEMA and other state and Federal agencies, the Obama Administration announced in June 2014 that nearly \$1 billion dollars would be made available to communities for mitigation projects through the National Disaster Resilience Competition in an effort to address the issue of mitigation and resiliency. The competition is designed so that communities that are working to increase safety and security and that have recently experienced a natural disaster, may compete for funds to help them rebuild and increase their resilience to future disasters. The White House press release announcing the competition may be found at <http://www.whitehouse.gov/the-press-office/2014/06/14/fact-sheet-national-disaster-resilience-competition>.

Of the \$1 billion, approximately \$820 million will be available for all non- Hurricane Sandy impacted areas across the United States who have had a Presidential Disaster Declaration in 2011, 2012, and/or 2013. States with qualifying disasters, and those units of local government who received Community Block Grant Disaster Recovery (CDBG-DR) funding under PL 113-2 for disasters occurring in 2011-2013, are eligible to apply. Beyond those qualifications, in FEMA Region V, the city of Chicago and Cook and Du Page Counties in Illinois are also potential applicants.

The key to a successful application will be a demonstration of how an award would help fund future resilience from the disaster that the community is currently recovering from (that is, the event that triggered the Presidential Disaster Declaration at any time during 2011-2013). The U.S. Department of Housing and Urban Development (HUD) notes that actions such as a proposed suite of building code changes, infrastructure audits, or pilot green infrastructure investments would be good examples of the possible aim of a grant.

The six objectives of the competition are:

1. To assure a fair and objective dispersal of the CDBG-DR funds;
2. To create science-based examples of disaster recovery;
3. To institutionalize sound approaches to addressing future risk;
4. To provide resources to increase local resiliency;
5. To explain the risk of climate change; and
6. To partner with non-governmental organizations to discover local solutions to local problems.

Winners will receive funds through HUD’s CDBG DR funds from the Disaster Relief Appropriations Act of 2013. A factsheet from HUD more fully explaining the competition may be downloaded from HUD’s website http://portal.hud.gov/hudportal/documents/huddoc?id=FactSheet_071514.pdf.

ReFresh Milwaukee: A City on the Edge of Innovation

Founded in 1848, Milwaukee is the 30th largest city in the United States and has a population of nearly 600,000 people. The city encompasses 98.6 square miles and lies adjacent to Lake Michigan at the confluence of the Milwaukee, Menomonee and Kinnickinnic Rivers.

As a brewer, major inland port, brick maker, and industrious city, Milwaukee exists because of its links to water. For over 150 years, the city has relied on its access to water for transportation, industry and public services. The U.S. Census estimates that since 2010 alone, the city has gained nearly 5,000 new residents.

As described on its homepage, ReFresh Milwaukee has been conceived as a “vision for community sustainability” that will help Milwaukee become a “center for sustainability innovation and thought leadership” by providing goals and targets for both citizens and organizations to “improve the environmental, economic and social conditions” within the city.

Though groundwork for a citywide sustainability plan began in 2004, ReFresh Milwaukee took 18 months to create and finalize. First published in 2013, the ReFresh Milwaukee plan seeks to prepare the post-industrial city for the challenges of a changing climate through a broad range of initiatives.

The goals of the plan are divided in eight major groupings: buildings, energy, food systems, human capital, land & urban ecosystems, mobility, resource recovery, and water. While each of these centers has unique objectives, most cannot be implemented or ultimately be successful without the cross-pollination of the goals of other sections of the plan.

At the beginning of the ReFresh Milwaukee effort, a survey showed that only 4 percent of residents viewed “flooding” as an impediment to the city’s recovery and future. And while it is difficult to argue that flooding is a more pressing issue to the quality of life in a city than education, employment, empty and abandoned properties, or any other “today” problem, the survey provided an indicator of what residents perceive as risks to their community.

However, the threat of flooding in Milwaukee is real. The past ten years have been a trying time for Milwaukee with storms at or near the established 100-year statistical benchmark during 2004, 2008, 2010, 2011, and 2013. As it might be expected, these storms produced significant flooding, basement backups, and sewage overflows. But Milwaukee, like nearly every American city, can’t afford to continuously upgrade their stormwater infrastructure to keep up with the ever increasing volume and frequency of the 100-year storm event. The logical alternative is to then mitigate, to the extent possible, the effects these storms have on people, property, and infrastructure.

Cities are made of concrete, steel, and asphalt. These materials also heavily contribute to the problem of runoff and flooding. But even so, there is much that can be done to manage, control, and even use runoff to our benefit.

ReFresh Milwaukee envisions multiple efforts to address the problem of urban runoff. The plan suggests that the following ideas might have a role to play and are reviewed below, beginning from the highest point of impact to the lowest:

Green Roofs: Beginning in 2004, the city's housing authority has been using green roofs to control and reduce the volume of runoff within the city. Today, the housing authority alone manages over 75,000 square feet of green roof in its housing inventory. The installation of green roofs is encouraged throughout ReFresh Milwaukee as both an environmental benefit and a generator of skilled jobs.

Tree Canopy: The city seeks to increase Milwaukee's tree canopy to 40 percent coverage from 22 percent. The addition of trees to an urban landscape offers many benefits to a city and includes well documented bonuses such as the removal of pollutants, the cooling of streets and buildings (helping abate a city's "heat island" effect), and an increase in property values. In the context of stormwater mitigation, additional trees assist in trapping water in the tree pit and in the leaves themselves (allowing for the slow release of water back into the air through evapotranspiration), thus reducing runoff.

Rain Barrels and Downspout (gutter) Disconnection: The Environmental Protection Agency's Rainfall to Roof Runoff Calculator estimates that the roof of a typical two story 2,000 square foot home covering about 1,250 square feet, will collect 779 gallons of water during a one inch rain event. Due to the foreclosure crisis of the mid-2000s and for other reasons, the city of Milwaukee currently owns 900 homes. If the city were only able to divert and capture, or slow the roof water on the residential properties it owns, over 701,000 gallons of water in a one inch storm would be kept from the city's municipal sewer system.

Rain Gardens and Bioswales: Like rain barrels and downspout disconnections to the sewer, rain gardens and bioswales are designed to retain precipitation on site to the extent possible, rather than have it join the municipal sewer system. The two systems are similar in that they are planted depressions near otherwise impervious surfaces that are meant to collect rainwater and other runoff locally, rather than have that runoff be captured by curbs, gutters, and drains that are meant to funnel water to a sewer system. A well-designed rain garden or bioswale can also add value to a property and assist in keeping pollution from reaching sensitive ecosystems.

Pervious Pavement: As noted above, a city by its very nature is a place of hard surfaces. But as ReFresh Milwaukee explains, the city is also a place of opportunity to try and test out new ideas. One such idea is to work with Milwaukee Public Schools to reduce impervious surface areas on school property. Research suggests that due to the extremely low weight loads, porous pavement in places like playgrounds might be a good place to increase the use of pervious ground surfaces.

Urban Agriculture: Eighty-five percent of Milwaukee is zoned for urban agriculture, thereby opening up potential sites to accept and store rainwater and to reduce sediment runoff. Using vacant lots as gardens helps stitch back together fractured urban communities.

Basements and other Empty Lots: Beyond the report, Milwaukee city employees have begun work on a concept of retrofitting the basements of abandoned properties to be used as cisterns to collect and store rainwater during and after severe storm events. While the idea is still in the development stage, the city is actively pursuing grants to identify sites and construct a prototype. Empty lots are also being considered for use as stormwater management areas.

If all of these steps were considered, the end result could yield a positive impact.

Additional efforts include the Home Grown project, which is focused on bringing fresh food to inner city neighborhoods in Milwaukee through the development of an integrated

food management system within the city. A complex vision, Home Gr/own has many inputs, variables and goals; however an important aspect of the project is a stormwater management program with a target to increase the volume of stormwater runoff captured through Home Gr/own project sites by 10% annually.

Another project, the Inner Harbor Redevelopment, will also include all the goals and targets of ReFresh Milwaukee's water efforts, including the reduction of stormwater runoff. The ultimate goal of the Redevelopment is net-zero stormwater runoff in the study area by 2023 in part by cleaning and holding water in redesigned public landscapes and other mitigation activities.

ReFresh Milwaukee encourages public feedback and interaction by supporting a vigorous presence on the web and social media. ReFresh Milwaukee's webpage can be found at refreshmke.com/, on Facebook at <https://www.facebook.com/MKESUSTAIN> and on Twitter at twitter.com/ReFreshMKE.

Updating Your Floodplain Ordinance

WDNR issued a new model floodplain ordinance in January 2012. The updated model was the result of three years of collaboration between WDNR and FEMA. The Standard Model Floodplain Ordinance is recommended for all communities without WDNR produced Flood Storage Districts. The Model Floodplain Ordinance with Flood Storage Modifications includes the language required to ensure flood storage districts are appropriately regulated.

The new Model clarified some outdated sections, provided further guidance on how to treat non-conforming structures, added additional technical standards for conducting engineering studies, strengthened the ties between local ordinance amendment processes and the requirements for Letters of Map Revision, and added a number of new definitions. The Model also included language on the limits Sec. 87.30 (2), Stats. places on fines in the floodplain (\$50/day/violation).

It was decided to phase in the adoption of the new Model. Communities are required to update the local ordinance to the new Model when new Flood Insurance Rate Maps are issued. However, communities may update at anytime. It may be a good idea to adopt the new Model before a Letter of Final Determination (LFD) is issued for your community. Once an LFD is issued, a community must adopt a compliant ordinance with six months or be suspended from the NFIP. If your community has a long adoption process or wishes to have a community-wide discussion of the ordinance language then having more than six months and no deadline may be a better option.

If you are interested in updating your local floodplain ordinance, copies of the models in .pdf format can be found at <http://dnr.wi.gov/topic/floodplains/communities.html>. You can also contact either Gary G. Heinrichs (gary.heinrichs@wisconsin.gov) or Miriam G. Anderson (miriam.anderson@wisconsin.gov) for a copy of the models in Word format. Comparisons between the new 2012 Models and previous model, review checklists and a document on the ordinance approval process are also available.

Please contact Gary, Miriam or your Regional Water Management Engineer (see map on page 9) for further information. Go to http://dnr.wi.gov/topic/floodplains/staff_flood.html for the most current contact information.

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Zoning Challenge

House A was heavily damaged in a flood. House B incurred minor damage in the same flood, but suffered a catastrophic fire two weeks later. Both homes are non-conforming and have been determined to be substantially damaged. Both home owners have applied for building permits to repair the houses. Is there any difference in what the home owners will be required to do when repairing the houses?



Yes, the houses will be required to meet different standards. House A was substantially damaged by flooding and therefore must meet the NR 116 requirements for new construction in the flood fringe: first floor elevated on fill to BFE+1; basement or crawlspace elevated to BFE; and dryland access. House B was damaged by a non-flood disaster (fire) and therefore must meet the minimum requirements of the NFIP. House B would only need to have the lowest floor elevated to or above BFE.

Risk MAP Fall 2014 Update

FEMA's national Risk Mapping, Assessment and Planning (Risk MAP) program is intended to result in local activities that reduce risk. In 2014, in partnership with the State of Wisconsin, FEMA Region V initiated efforts designed to engage selected communities in discussions about local risk reduction activities that result in safer communities. Over the coming year, FEMA Region V and State representatives will be facilitating meetings with community officials, mitigation consultants and regional stakeholders to define desired local mitigation activity implementation steps, challenges and needed technical support. This effort is not intended to replace existing mitigation planning efforts, but to enhance them by identifying federal and state tools, resources and technical assistance that may enable progress on local risk reducing mitigation activities. The meeting goals include development of a local implementation strategy for a community-selected mitigation activity, and in some cases, limited technical support toward progress on that activity.

In Wisconsin, FEMA and the Wisconsin Department of Natural Resources and Division of Emergency Management have been working with STARR, FEMA's consultant, to discuss mitigation actions with Wisconsin communities. Through this partnership, mitigation technical assistance needs have been documented for future funding considerations and to inform local planning efforts. In addition, some communities are receiving technical assistance or other support to reduce risk including assistance with expanding local GIS database data and capabilities to reflect risk and improve outreach, study impacts of dam modeling and assessing options for floodproofing equipment in city facilities.

In the fall and winter, engagement will begin with the Villages of Avoca, Cross Plains,

Mazomanie, and Wauzeka; Cities of Boscobel and Prairie du Chien, Crawford, Grant, Iowa, Richland, Sauk, and Columbia Counties and 53 additional communities in the Wolf Watershed. The selected communities can anticipate hearing from STARR about meeting dates and may also be contacted to talk by phone about mitigation interests, needs and community goals in risk reduction. Communities are invited to identify organizations and stakeholders to participate in the conversation, which is geared toward helping the community plan a risk reducing activity that may include technical support from FEMA. If you have any questions about the program, please contact any of the following project partners:

Meg Galloway, WI DNR, at meg.galloway@wisconsin.gov

Roxanne Gray, WI DEM, at roxanne.gray@wisconsin.gov

Rebecca Leitschuh, FEMA RV, at rebecca.leitschuh@fema.dhs.gov

Nate Catania, STARR, at catanianc@cdmsmith.com

Current Letters of Final Determination

Letters of Final Determination (LFD) have been issued for several counties. Once an LFD has been issued, all communities in the county participating in the NFIP have six (6) months to amend the local floodplain ordinance to include the new FIRMs and Flood Insurance Study. Communities which do not adopt by the effective date of the maps will be immediately suspended from the NFIP. Communities which do not currently participate in the NFIP have one (1) year to join the NFIP and adopt the new maps.

All ordinance amendments must be reviewed and approved by the DNR and FEMA before the effective date. For further information on ordinance amendments and adoption go to <http://dnr.wi.gov/topic/floodplains/communities.html> and download the appropriate DNR Model Floodplain Ordinance and Checklist and the Ordinance Approval Procedures. You may also contact your DNR Regional Engineer.

LFDs have been issued for the following counties and all the incorporated communities within the county:

County	Effective Date
Jefferson County	February 4, 2015
Waukesha County	November 5, 2014

DNR Website for Mapping Status

The Department of Natural Resources has developed a website to provide communities and others with information regarding the Risk Map Program in Wisconsin. The website contains information on project status, the public open house schedule, the comment and appeal process, post preliminary map process and other mapping related issues.

Links to FEMA's website are included for information on Letters of Map Change and the Map Service Center.

For further information regarding the Risk Map Program contact:

Colleen Hermans - GIS/Process Issues
colleen.hermans@wisconsin.gov

Christopher Olds - Technical Issues
christopher.olds@wisconsin.gov

Lee Traeger - FEMA
lee.traeger@dhs.gov

The website is located at:
<http://dnr.wi.gov/topic/floodplains/>

Staff Changes

Barton Chapman - Watershed Management

Bart was recently hired as a Dam safety/Floodplain Engineer in the Northern Region. He has a BS in Environmental Resources Engineering from Humboldt State University and a MS in Civil Engineering from Oregon State University. Prior to joining the DNR Wasterwater Program in 2012, Bart focused his career on the management of natural resources by integrating water resources engineering and natural sciences. He has in-depth training and experience in large-scale watershed restoration and has developed, designed and implemented the removal of 50 miles of low-volume forest roads and the restoration and enhancement of 60 acres of wetlands and 8 miles of trout streams. He worked as an Assistant Watermaster for the Oregon Department of Water Resources where he assisted the water user community in the interpretation and enforcement of Oregon Water Law and was responsible for implementing the Safety of Dams program for 72 jurisdictional dams in Southern Oregon. As a consulting engineer, Bart has worked on a variety of water resources projects requiring NEPA and Clean Water Act compliance including hydroelectric FERC relicensing, water and wastewater treatment, municipal water intake fish screening and large-scale streambank protection. Bart will be responsible for Iron, Vilas, Price, Oneida, Lincoln, Langlade, Forest and Florence counties.

Contact information: Wisconsin Department of Natural Resources, 107 Sutliff Ave., Rhinelander, WI 54501 (715) 365-8938, barton.chapman@wisconsin.gov.

Kay Lutze - Shoreland Zoning Policy Coordinator

Kay brings to this position 17 years of county code administration for Door County. Most recently she was President of the Wisconsin County Code Administrators. Kay was actively involved in working with the Wisconsin Wetlands Association to provide wetland identification training to code administrators across the state. She holds a Master's Degree in Environmental Science and a Bachelor's Degree in Environmental Science with a minor in Biology from the University of Wisconsin Green Bay. She lives in Manitowoc with her husband Aaron and yellow lab Maggie. In her free time she enjoys muskie fishing, camping and loves to ride her motorcycle.

Contact information: Wisconsin Department of Natural Resources, 12984 Shawano Ave., Green Bay, WI 54313-6727, kay.lutze@wisconsin.gov.

Training/Workshops/Conferences

Floodplain Management On-Line Training/Webinars

Association of State Floodplain Managers

<http://www.floods.org/index.asp?menuID=325&firstlevelmenuID=180&siteID=1>

The Association of State Floodplain Managers (ASFPM) in conjunction with RedVector hosts a variety of courses on its website such as *Making the Flood Zone Determination* and *Open Channel Hydraulics III: Uniform Flow*. ASFPM has approved these courses for CECs for Certified Floodplain Managers. Fees for the courses range from \$25 - \$200.

FEMA

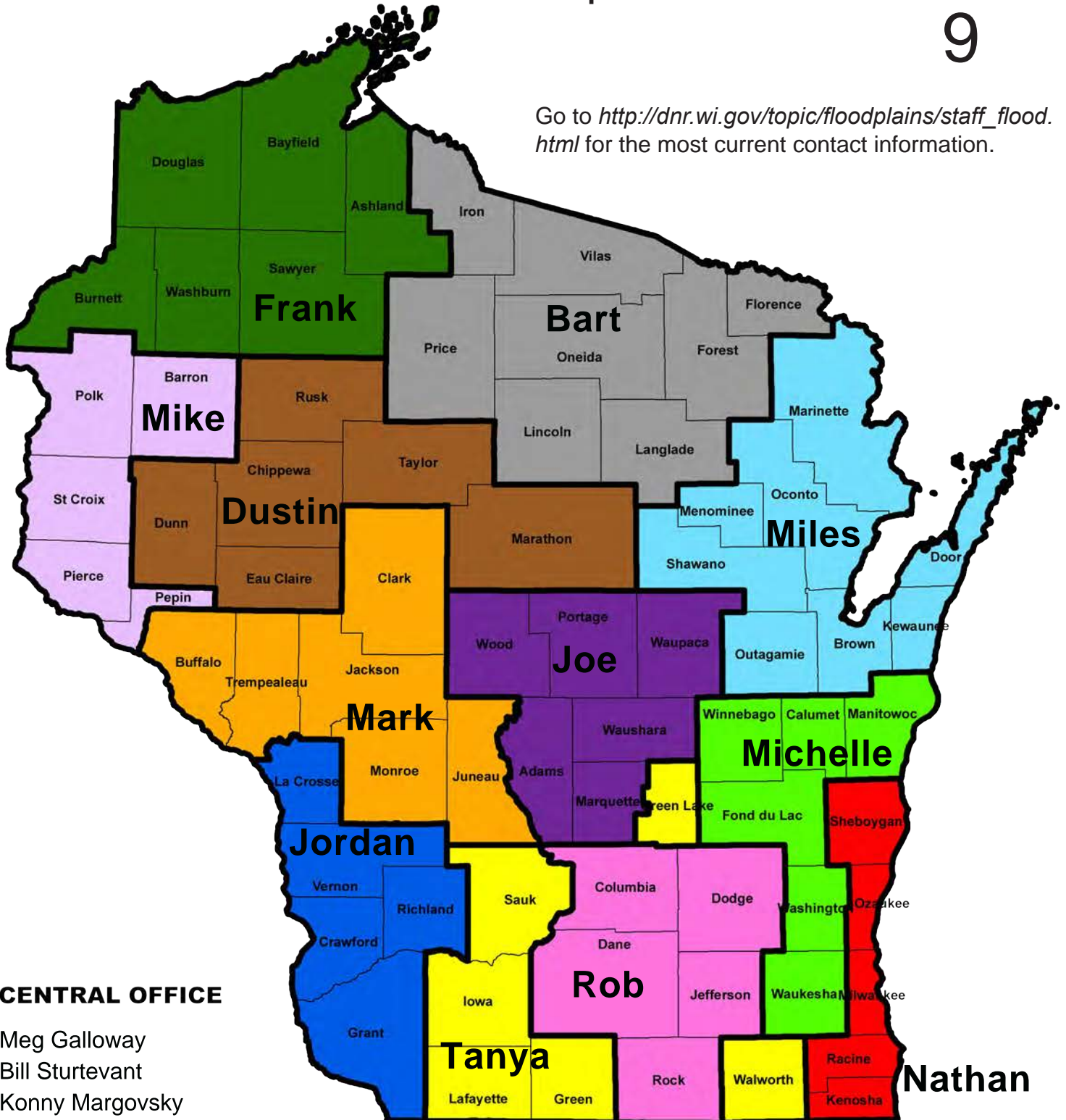
<http://www.fema.gov/online-tutorials>

The Federal Emergency Management Agency (FEMA) develops multimedia tutorials to provide in-depth training on different facets of the National Flood Insurance Program (NFIP) and to support public education and outreach efforts as part of the Risk Mapping, Assessment and Planning (MAP) strategy. The tutorials are intended for the general public, mapping professionals, mitigation planners and community officials interested in

Dam Failure and Flood Response Contacts

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Go to http://dnr.wi.gov/topic/floodplains/staff_flood.html for the most current contact information.



CENTRAL OFFICE

Meg Galloway
Bill Sturtevant
Konny Margovsky
Chris Olds
Gary Lepak
Gary Heinrichs
Dam Safety Truck
Mark Budsberg

The State Warning Center and the DNR Duty Officer can be reached at 1-800-943-0003, prompt 1; or directly at 608-576-5358; if there is no response, call the pager at 608 376 9049.

If the caller does not receive a call from the DNR D.O., contact David Woodbury at 608 271 5022 or his cell phone, 608-444-3976. If he is unavailable, request District 1 Dispatcher (608-846-2129) to attempt to raise the D.O. or LE staff by radio.

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learning about available NFIP tools, including how to read a Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) Report and how to use FEMA flood hazard mapping software applications utilized in the NFIP. The tutorials are free.

Floodplain Management Workshops/Conferences

Wisconsin Association of Floodplain, Coastal and Stormwater Managers' 2014 Conference

October 29 – October 31, 2014

Glacier Canyon Lodge Conference Center, Wisconsin Dells, WI

The Wisconsin Association for Floodplain, Stormwater, and Coastal Management (WAFSCM) will be holding its 12th Annual Conference on October 29 – October 31, 2014, at the Glacier Canyon Lodge Conference Center, Wisconsin Dells, WI. This year's conference theme is "*Water – from Sewer to Stream to Shoreline*". Professional Development Hours (PDHs) can be achieved for all the conference events, up to 12 PDHs for attending events Wednesday through Friday.

The first day of the conference, Wednesday includes three workshops: Certified Floodplain Manager (CFM) Refresher; Coastal Shoreland Protection; and FEMA's Community Rating System (CRS). Attendees will also have the opportunity to tour the water park water recycling system at the Wilderness Resort in the late afternoon. Thursday, will be the main conference day with plenary and concurrent sessions throughout the day. Friday will focus on field tours and the CFM Exam.

More information on the WAFSCM 2014 conference agenda and registration can be found at <http://www.wafscm.org/annual-conference/>.

Certified Floodplain Manager Exam

The Association of State Floodplain Managers (ASFPM) has established a national program for professional certification of floodplain managers. The program recognizes continuing education and professional development that enhance the knowledge and performance of local, state, federal, and private-sector floodplain managers. The primary goal of the ASFPM Certified Floodplain Manager Program (CFM Program) is to help reduce the nation's flood losses and protect and enhance the natural resources and functions of its floodplains by improving the knowledge and abilities of floodplain managers in the United States.

A CFM Refresher Workshop and a CFM exam will be held at the 2014 Wisconsin Association for Floodplain, Stormwater, and Coastal Management Conference in Wisconsin Dells, WI. The all day workshop will be held on Wednesday, October 29, 2014. The exam will be held on Friday, October 31, 2014.

For more information on becoming a CFM and how to register for the upcoming exam go to www.floods.org and choose *Certification Program*.

Mississippi River Conference

October 15-17, 2014

Stoney Creek Inn, Moline, Illinois

The 7th Annual Upper Mississippi River Conference will be held October 15-17, 2014 at the Stoney Creek Inn, Moline, Illinois. The conference will be held in conjunction with the Mississippi River Network's 2014 Annual Meeting . This year's theme, *A Resilient River*

from the Headwaters to the Gulf reflects the conference's change in focus from just the Upper Mississippi River to the entire length of the river. The annual conference provides a comprehensive forum to discuss the issues and opportunities associated with the Mississippi River. Certified Floodplain Managers can receive up to 12 CECs for attending the conference.

More information on the conference including the agenda, speakers, registration and lodging can be found at <http://www.riveraction.org/umrc/node/13>.

Wisconsin Emergency Management

Mitigation for Emergency Managers (G393).

December 2 – 4, 2014.

Madison, WI.

This course is designed to train emergency managers and other interested individuals who have no specialized technical background, but who can support mitigation efforts as advocates. Contact Roxanne Gray at roxanne.gray@wisconsin.gov for more information.

FEMA Emergency Management Institute (EMI)

FEMA's Emergency Management Institute offers a variety of courses related to hazard management at the Emmitsburg, MD campus. There is no charge for the courses, lodging or transportation to and from the airport to EMI. Attendees are eligible for reimbursement of travel costs. Applicants will be charged a non-reimbursable fee for meals (\$125.20 for most courses). Applications to attend EMI must be approved by Wisconsin Emergency Management (WEM). The WEM Training Office can be contacted at 608/242-3232 wempio@wisconsin.gov.

EMI also offers independent study courses. The Emergency Management Institute (EMI) offers self-paced courses designed for people who have emergency management responsibilities and the general public through the Independent Study Program (ISP). All are offered free-of-charge to those who qualify for enrollment.

Information on course schedules and applications can be found at www.training.fema.gov/EMICourses/.

E157: Hazard Mitigation Community Education and Outreach Specialist Qualifying Course. January 6 – 8, 2015. Emmitsburg, MD. This course provides the opportunity for Hazard Mitigation Community Education and Outreach Specialists to attain the knowledge and skills needed to demonstrate the behaviors/ activities in their Position Task Books and to perform tasks that will be required during a disaster operation.

E158: Hazard Mitigation Community Planner Specialist Qualifying Course. February 18 -19, 2015. Emmitsburg, MD. The goal of this course is to provide the opportunity for Hazard Mitigation (HM) Community Planner Specialists to attain the knowledge and skills needed to successfully demonstrate the behaviors/ activities in their Position Task Books and to perform tasks that will be required during a disaster operation.

E273: Managing Floodplain Development through the NFIP. March 30 – April 1, 2015. Emmitsburg, MD. This is a basic NFIP four day course that lays the foundation for working with the NFIP in application in the field, and is targeted for local, tribal, state and federal floodplain managers. Topics covered include outreach, mapping (risk determination), rules and regulations, permitting, elevation certificate, substantial damage and substantial improvement, flood insurance and legal issues as well as other important topics.

WISCONSIN ASSOCIATION FOR FLOODPLAIN, STORMWATER AND COASTAL MANAGEMENT (WAFSCM)

Membership Application/Renewal Form January 2014 - December 2014

Membership Fee: \$20.00

Name: _____

Title: _____

Organization: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Ext.: _____ Fax: _____

E-mail: _____

Would you like to receive occasional announcements, newsletters and/or notices via E-mail: Yes ___ No ___

Other Affiliations: _____

Primary Interest: ___ Floodplain ___ Stormwater ___ Coastal

Specific Interest: _____

Please send a check for the annual Membership Fee of \$20.00 made payable to WAFSCM in care of:

Minal Hahm
WAFSCM
c/o M Squared Engineering
W62N215 Washington Avenue
Cedarburg, WI 53012

If you have questions, contact Minal Hahm at either (262) 376-4246 or minal@msquaredengineering.com

"Floodplain and Shoreland Management Notes" is published by the WDNR, Bureau of Watershed Management. Its purpose is to inform local zoning officials and others concerned about state and federal floodplain management, flood insurance, shoreland and wetland management, and dam safety issues. Comments or contributions are welcome.

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Floodplain Contacts:

- Gary G. Heinrichs, 608-266-3093
gary.heinrichs@wisconsin.gov
- Miriam G. Anderson, 608-266-5228
miriam.anderson@wisconsin.gov

Shoreland Contacts:

- Water Management Specialist
under Contact Information
<http://dnr.wi.gov/topic/Waterways/>

Dam Safety Contacts:

- Bill Sturtevant, 608-266-8033
william.sturtevant@wisconsin.gov
- Meg Galloway, 608-266-7014
meg.galloway@wisconsin.gov