

# The Antediluvian

## Ohio's Floodplain Management Newsletter

Providing leadership in the cooperative management of Ohio's floodplains to reduce flood damage and recognize their natural benefits.



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Fall 2008

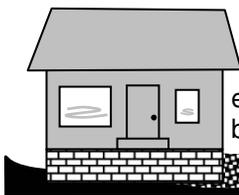
Issue 2

### Crawlments / Base space: *Is there a subgrade drainage option?*

By Christopher Thoms, CFM—Program Manager  
ODNR, Division of Water—Floodplain Management Program

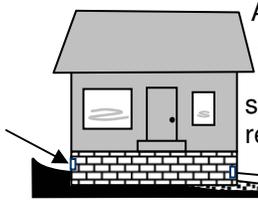
Floodplain, swale, valley, glen, ravine, gorge, wetland, meadow, puddle, burn, creek, river, pond, lake, reservoir, well, ditch, crawlspace, and basement; all are terms used to refer to low-lying areas and corresponding wetness. The lower the area, the more likely that water will collect and remain.

When preparing a development, builders must consider soil types, compaction, moisture, and drainage to ensure sound construction. When excavating, these considerations are even more pressing (pun intended). Again, the lower the area, the more likely that water will collect and remain.



Surface and sub-surface water pressing against a basement wall (hydrostatic pressure) can cause leaks, flooding, and may also result in catastrophic failure of the wall or the entire structure. In recognition of this, sound flood risk reduction standards discourage basements in floodplains.

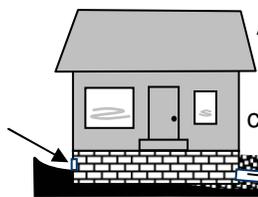
Some confusion arises when builders propose to construct a subgrade crawlspace. In NFIP-participating communities, a **basement** is defined as *any area of a building having its floor subgrade (below ground level) on all sides*.



A structure with at least one side of the lowest floor at-or-above exterior lowest adjacent grade, is not a basement by this definition. Such a structure may be designed to reduce flood risk and so, also benefit from lower flood insurance premiums, using performance standards specified for an *Enclosure Below Lowest Floor* as found in the flood damage reduction regulations of NFIP-participating communities (see related article in *The Antediluvian*, Spring 2008, page 4). These standards include use restrictions for that enclosed area and require a design that will equalize hydrostatic pressure.

FEMA's Technical Bulletin 1-93 *Openings in Foundation Walls...* (page 3) provides guidance for the preferred flood risk reduction standard that would require at-or-above grade crawlspaces and cautions against creating a basement by *...placing fill dirt around the outside of a foundation. ...To meet the NFIP requirements, fill placed around the foundation walls must be graded so that the grade inside the enclosed area is equal to or higher than the adjacent grade outside the building...*

So, can a basement or crawlspace be designed to meet the *enclosure below lowest floor* openings requirements by using subgrade gravity-drained pipe(s) to equalize hydrostatic pressure by conveying floodwater to a remote at-grade level? The answer is no, but...



Although discouraged, a community may choose to adopt performance standards that allow subgrade crawlspaces. But, even then, there are restrictions including a requirement for adequate drainage by gravity (porous soils, pipes, tiles, gravel, etc.) or mechanical means. Though FEMA states that *a (b)elow-grade crawlspace construction in accordance with the requirements listed above will not be considered basements* (Interim Technical Bulletin 11-01 *Crawlspace Construction...* page 5), they caution that

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subgrade crawlspaces will incur higher flood insurance premiums (page 6).

Citing CFR §60.3(c)(5), FEMA also stresses that *(t)he non-engineered opening requirements are designed for openings in exterior walls. When a pipe is added to the opening, for the purpose of extending it, the opening then falls under the requirements for engineered openings. Concluding that (u)nless communities meet the opening requirements, structures will be considered in violation of the NFIP regulations and the bottom of the crawl space will be rated as the lowest floor for insurance purposes.*

Therefore, only in communities that have incorporated it into their law, the FEMA Technical Bulletin 11-01 provides guidance for a subgrade area that is neither basement nor enclosure, but will permit engineer-certified pipes, with the additional feature of having higher insurance premium rates.

## **LOMR-F Applications: *Do you know what you're acknowledging?***

By Jonathan Sorg, CFM—Environmental Specialist  
ODNR, Division of Water—Floodplain Management Program

A Letter of Map Revision Based on Fill (LOMR-F) is a letter from FEMA stating that an existing structure or parcel of land that has been elevated by fill would not be inundated by the base flood. Any individual interested in obtaining a LOMR-F must complete FEMA Form 81-87, *Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill* (MT-1). This involves obtaining multiple pieces of information, including a copy of the property deed, a map showing the surveyed location of the property, a plat map, a copy of the effective Flood Insurance Rate Map panel showing the property, and certified lowest adjacent grade and lot elevations (by a licensed land surveyor).

In addition to the property information, the applicant must have the local floodplain administrator sign the Community Acknowledgement Form that is a part of the MT-1 application. There are three major elements of this acknowledgement: compliance with floodplain management regulations, “reasonably safe from flooding,” and compliance with the Endangered Species Act. It is imperative that local floodplain administrators understand what they are “acknowledging” when they sign this form to complete a LOMR-F application.

*Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements ... In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by DHS-FEMA, all analyses and documentation used to make this determination.*

The terms “existing” or “proposed” indicate **all** development must meet the requirements listed in the community's flood damage reduction regulations and be “reasonably safe from flooding.” Therefore, if someone is seeking a LOMR-F on an undeveloped parcel of land, any structure placed in perpetuity on that parcel must comply with the regulations.

Local officials should ask themselves, “Why would an individual request a LOMR-F for land only?” In terms of flood insurance, there is no advantage to seeking a LOMR-F for land only because land is not insurable. If there is no proposed structure to be placed on the lot, there would be no cost of complying with community

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building standards. FEMA's expectation is that structures are intended for lots removed from the SFHA via fill.

FEMA Technical Bulletin 10-01 is a means of evaluating "reasonably safe" development, such as structures adjacent to flood hazard areas or structures built prior to the flood risk being identified (pre-FIRM structures). However, this guidance has also been interpreted by some as providing guidance for building basements in filled floodplains. It was not intended for proposed residential structures in flood hazard areas. **CAUTION** should be taken with this technical bulletin because LOMR-F processing is based on the federal minimum standards found in 44CFR §65.5, not TB 10-01.

Local permitting authority is tied to areas identified as flood prone (on FIRMs these are Special Flood Hazard Areas). Once a LOMR-F is approved, the land is no longer subject to floodplain regulations. Communities cannot in good faith certify that future development will be compliant and "reasonably safe" unless they have other authorities to regulate such development. If there is no local authority after a LOMR-F is obtained, we recommend the community not sign the acknowledgement form.

*... and that all necessary Federal, State, and local permits have been, or in the case of a Conditional LOMR-F, will be obtained... For LOMR-F or Conditional LOMR-F requests that have the potential to impact an endangered species, documentation will be submitted to show that we have complied with Sections 9 and 10 of the Endangered Species Act (ESA).*

Even though this seems to be an addition to the Community Acknowledgement Form in the December 2007 update of the MT-1 application, it was always a requirement for floodplain development reviews. Prior to issuing a floodplain development permit, floodplain administrators must ensure all other necessary federal, state, and local permits have been obtained (44CFR §60.3(a)(2)). That said, all developments should be evaluated for potential impacts to threatened or endangered species, and the burden of proof should be placed on the entity proposing the development. Landowners/developers should contact their closest US Fish and Wildlife Service Ecological Services office for the state of Ohio at (614) 469-6923 to determine if their activities may impact threatened or endangered species. Further general information regarding this requirement can be found at the National FWS website: [www.fws.gov/endangered/hcp/index.html](http://www.fws.gov/endangered/hcp/index.html) with Ohio-specific guidance available at the Ohio FWS office website: [www.fws.gov/midwest/reynoldsburg/letter.html](http://www.fws.gov/midwest/reynoldsburg/letter.html).

So, there is more to the Community Acknowledgement Form than simply recognizing that someone is applying for a map change. The form may place a small burden on local officials, but it ensures that development is both compliant with NFIP development standards and "reasonably safe from flooding." If you have any questions about the Community Acknowledgement Form, please contact Jonathan Sorg at (614) 265-6780.



### ***Is it time for change?***

By Cindy Crecelius, CFM—Program Manager (retired)  
ODNR, Division of Water—Floodplain Management Program

With the pending national election, you have no doubt been exposed to all the political rhetoric that is flying around the airwaves. A common nonpartisan theme is definitely out there – we need change! The major parties disagree on how we get there and what the "change" will look like, but they agree it is time to change.

The question of change, related to the management of floodplains, has also been asked at the national level. Current debates in Washington, DC on proposed modifications to the National Flood Insurance Program, suggest a change that will require flood insurance for areas that are protected by structures such as levees and dikes. This shift in thinking is based on recent flood experiences and a realization that not all risk can be eliminated with structural protection. Many are worried that this requirement will negatively affect development and the already financial-strained homeowners and businesses. These concerns over expanding the requirements for flood insurance are being refuted with the same worries expressed forty years ago when the NFIP was created. **Is it time to change our thoughts about the need for flood insurance and flood risk?**

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Government periodically evaluates whether the programs and services offered need to change. Strategic planning is one approach for evaluating. You know the questions: are you doing things efficiently; are you effective at what you do; and are you doing the things you need to do to accomplish the mission/vision/goal? In other words, should we change things or stay on track? A hint at the answer, may be found in the Will Roger's quote used by Greg Main (Indiana National Flood Insurance Program State Coordinator) in his keynote address at Ohio's 2008 Statewide Floodplain Management Conference, "Even if you are on the right track, you'll get run over if you just sit there." Greg used the quote to demonstrate that action is needed. A broader interpretation is that staying on the track with motion, may still not get us what we need. **With all the political excitement in the air it's a good time to ask - do we need to "change" how we are managing floodplains?**

To answer this question we need to understand what we are doing and why we do it. Depending on where you are in a career, you will use different information as you evaluate the need for change. I tend to draw on nearly 30 years of working in floodplain management and my "history" of the NFIP in my decisions about what and how to change the program as we now know it. I'm not sure how I would answer the questions of change with only 2-3 years of experience. Some might say that no experience means no ability to assess. Others may think that those with the history or experience, are closed to new or different approaches. I think there is some truth in both perspectives. To help both those with tenure and the rookies of floodplain management in deciding if "change" is due, the rest of the article provides background on why floodplain management is what it is.

In the late 1970's the United States Army Corps of Engineers (USACE) funded a team of researchers from the University of Massachusetts, to study the fragmentation of floodplain management authority and the coordination between those with authority. The study focused on small to medium size streams that were in areas likely to develop. The original study was published in 1980 and was later condensed into a FEMA document titled Multi-Government Management of Floodplains in Small Watersheds (Federal Emergency Management Agency, September 1981). FEMA's document was compiled to support their training and outreach for reducing flood losses. Some of the major concepts and principles outlined in the document follow.

The current approach is multi-government management of floodplains for many different purposes. Communities and agencies have been given the challenge of managing their floodplains in the best interest of public entities, private citizens, and future generations. A shared "mission" has been created to keep people and property safe, maintain natural floodplain functions, and to sustain positive growth. There are many decision-makers, public authorities and private interests that need to be served. Public and private decision-making for land use is at the heart of the challenge in managing the floodplains.

It is documented that the responsibility for managing the floodplains is placed in the hands of many, but that they individually control only pieces or parts of the watersheds and floodplains. Each decision-maker is focused on the biggest individual benefit that they receive from use and development of their floodplain. These decision-makers consistently try to avoid the consequence of the flooding by filling or building floodwalls or levees to protect their development. They rarely consider increased flood problems elsewhere, because they are only responsible for their jurisdiction. **Have we set ourselves up for conflicting policies and inconsistent responses to flooding using the current approach?** Maybe, if we can't find a way to effectively coordinate and choose flood solutions that are mutually responsible.

The National Flood Insurance Program (NFIP) was designed to work across multiple levels of government (federal, state, and local roles), and address the need for better intergovernmental coordination. It also partially addresses the private-public decision-making process involved when using and developing the floodplain. Through a sensible framework, the NFIP sets up a basic floodplain management system using minimum criteria. This increases the public's awareness of flooding, but has not done well in communicating the true flood risk. People focus on the identified hazard instead of seeing the connection between the use of land (urbanization) and the full watershed impacts (depth, extent, and rate of flooding).

Research indicates that the public and many state and local governments do not appreciate the true cost of flood disasters. Federal and state disaster assistance as well as the federal subsidy of flood insurance premiums offset their understanding of the real damage costs. This approach vaguely assigns responsibility for floodplain management to "public" entities or government (federal, state and local) with the NFIP being one of the clearest strategies for defined roles and responsibilities. The authority for

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regulation of land use and development is tied to political jurisdictions; however, often floodplains (rivers and streams) form boundaries between private-property owners, states, counties, cities, and villages. This results in an environment with shared responsibility for management, but where no one entity has the authority to fully address their flood problems. That's why coordination is so important.

The USACE research considered both how we manage floodplains and who is managing those floodplains. In the final study, both key players and their roles are identified. Private property owners have discretion over the use of land. Generally, they are constrained in use or development decisions by broad health, safety and welfare concerns. The most effective floodplain management will result when owners are well informed about flood risk and cooperate in managing that risk.

Municipalities are granted authority to plan and regulate land use as well as to acquire land for public purposes. They possess "power" to guide development away from the hazardous floodplain. The effectiveness of a municipality's floodplain management is related to how much of the watershed it controls, their financial commitment to planning, and how well the long-term costs of flooding are integrated with development decisions.

Counties have authority to plan and zone outside of the incorporated areas and can also act as coordinators for all of the cities and villages within their geographic boundaries. Floodplain management effectiveness, at this larger unit of government, can be limited by specific legal powers and the fact that the geographic boundary may still not be large enough to cover an entire watershed or flooding source. The counties have also been instrumental in helping to form and support "special districts" that crosscut local, county and state boundaries and manage based upon a common policy or program. Two Ohio examples are the conservancy districts and local watershed organizations.

The State has delegated land use authority to the local government level. The statewide interest to reduce flood loss, protect floodplain natural resources, and protect people and property from flood damage is addressed by state legislation and ODNR, DOW, Floodplain Management Program's efforts to build effective local floodplain management capability. The State standards for floodplain management are the minimum criteria of the National Flood Insurance Program.

Although others may provide support in addressing floodplain management, three Federal agencies are recognized as leaders. The Federal Emergency Management Agency (FEMA) is the lead on mitigating or reducing risk through the NFIP, disaster assistance, and mitigation funding. The U.S. Army Corps of Engineers (USACE) is lead for structural flood control solutions (e.g., dams, levees, and channel modifications), but they also provide floodplain management services that include planning and non-structural activities. The Natural Resource Conservation Service (NRCS) has led in floodplain management solutions for rural watersheds. They have programs and resources that accomplish building small flood control dams, acquiring land, and watershed planning studies.

You now have a flavor of the multiple government, multiple purpose, and public-private nature of floodplain management today. There have been several successes under this approach including: reduced individual economic impact through flood insurance and disaster assistance; reduced property damage due to flood protection standards; increased awareness that flooding is a risk; and intergovernmental coordination. Even with the success, change is needed to better integrate flood risk management with planning and development decisions. We are currently mitigating, but preventing may be more efficient and effective.



Between now and the November election, I'm sure we will continue to hear much more about change and the need for it. Remember that "change" can include everything from replacing with a similar kind, to converting to a new function. Floodplain management can be a process for bringing private and public interests together to discuss individual objectives and policies. It is the framework for coordinating, planning and choosing mutually responsible actions. Federal, state, county and local governments share the responsibility to use and develop floodplains wisely alongside private property owners. As we think about "change", consider where we are coming from and where we need to go! **Is it time for a change in your floodplain management program?**



## OFMA Update

By Alicia Silverio, CFM—Senior Environmental Specialist  
ODNR, Division of Water—Floodplain Management Program

### 2008 Ohio Statewide Floodplain Management Conference

On August 27-28, 2008, the Federal Emergency Management Agency (FEMA), Ohio Department of Natural Resources (ODNR), and Ohio Floodplain Management Association (OFMA) coordinated the ninth annual Ohio Statewide Floodplain Management Conference at *The Columbus, A Renaissance Hotel* in downtown Columbus. The conference theme “Taking Action After the Disaster” directed the agenda, which discussed community responsibilities and strategies for post-flood recovery throughout Ohio. The conference featured Mr. Greg Main, Vice Chairman of the Association of State Floodplain Managers (ASFPM) and Indiana National Flood Insurance Program (NFIP) Coordinator, as the Keynote Speaker. His presentation focused on the conference theme as he reviewed his experience working with communities in post-flood situations.

The conference convened with over 200 public and private sector professionals learning about current issues in floodplain management. The agenda offered three concurrent tracks (48 sessions and 46 speakers) addressing post-flood responsibilities and experiences, floodplain management regulations, mitigation, levees, floodplain mapping, and flood insurance. The conference also included several new features this year, including a Mock Disaster, “Floodplain Management Essentials” Workshop Modules, individual CRS consultations, a tour of the West Columbus Local Protection Project (Franklinton Floodwall), and a Letter of Map Change (LOMC) Workshop. OFMA also proctored the Certified Floodplain Manager (CFM) exam on August 26<sup>th</sup> to seven individuals.

Conference attendees can receive Continuing Education Credits (CECs) for attendance at the conference. The Association of State Floodplain Managers (ASFPM) has allocated 12 CECs toward CFM accreditation for two days’ attendance. The Board of Building Standards (BBS) has awarded eight CECs for all disciplines, except NRIUI and RIUI. (Approval # BBS-2007-404).

OFMA also coordinated the organization’s second annual golf outing on August 29<sup>th</sup> at the Darby Creek Golf Club in Marysville, Ohio. The daylong networking event drew 40 players of varying skill levels. Conference presentations and photos will soon be posted on the OFMA website at [www.ofma.org](http://www.ofma.org).

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## Thank You for Your Support!

OFMA would like to thank the following Sponsors for their support of the 2008 Ohio Statewide Floodplain Management Conference:

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OFMA would like to extend its sincerest thanks to the following:

- **FEMA** for providing support and funding to enable the coordination of the Statewide Conference.
- **2008 Conference Planning Committee** [Shawn Arden, Marty Bresher, Jim Mickey, Mike Mihalisin, Mary Sampsel, Ben Schattschneider, and Ray Sebastian] for all their time, effort, and dedication.
- the **Presenters** for all their work to prepare and convey information to conference attendees with the purpose of promoting wise and effective floodplain management throughout Ohio.
- the **Exhibitors** [United States Geological Survey, Water Management Association of Ohio, ODNR Floodplain Management Program, Federal Emergency Management Agency, and the Hancock Regional Planning Commission] for sharing their expertise and resources with conference participants.
- the **Attendees** for their time and effort to learn how to improve flood damage reduction throughout their communities.

### **Congratulations to Ohio's Newest CFMs!**

Since the 2007 conference, Ohio has gained the following CFMs: James Decker (Mentor), Amit Ghosh (Cincinnati) Joseph Gonda (Canfield), Clyde Hadden (Mentor), Matthew Leshner (Westerville), Thomas Odenigbo (Centerville), Wayne Rinehart (Marietta), Harold Scobie (Richfield), and David Smith (Cleveland).

### **OFMA Recognition Awards**

Each year at the Ohio Statewide Floodplain Management Conference, OFMA acknowledges individuals for their dedication and service in floodplain management by presenting Recognition Awards. The OFMA Awards Committee solicits nominations throughout the year, to identify extraordinary individuals and programs for their professionalism, enthusiasm, and support of floodplain management. The Committee reviews nominations and selects recipients based on the award criteria. Congratulations to the 2008 OFMA Recognition Award Recipients:

- **Floodplain Administrator of the Year** was awarded to Ray Mennega (Muskingum County)
- **Award for Innovation in Floodplain Management** was awarded to the Hancock Regional Planning Commission
- **Distinguished Member Service** was awarded to Alicia Silverio (ODNR Floodplain Management Program)
- **Certificates of Appreciation** were presented to Ray Sebastian (Clermont County Building Department), Mary Sampsel (Union County Engineer's Department), and Miles Hebert (EMH&T) for their years of service on the OFMA Board.

### **2008-2009 Ohio Floodplain Management Association (OFMA) Board**

Congratulations to the newly elected members of the OFMA Board: Fred Fowler, CBO, (Delaware County) Todd Richard, CFM (City of Findlay) and Glenn Heistand, PE, CFM (EMH&T).

Following is a list of the 2008-2009 OFMA Executive board:

|   |  |
|---|--|
| Chairman: Mike Mihalisin, CBO, CFM          | Member-At-Large: Chad Berginnis, CFM     |
| Vice-Chairman: Shawn Arden, PE, CFM         | Member-At-Large: Fred Fowler, CBO        |
| Secretary: Jerry Brems, CFM                 | Member-At-Large: Glenn Heistand, PE, CFM |
| Treasurer: Tadd Henson, PE, CFM             | Member-At-Large: Jim Mickey, CFM         |
| ODNR Representative: Christopher Thoms, CFM | Member-At-Large: Randy Pore, CFM         |
| Past Chair: Alicia Silverio, CFM            | Member-At-Large: Todd Richard, CFM       |

### **Regional Certified Floodplain Manager (CFM) Exam**

OFMA will be offering the CFM exam on November 4, 2008 from 1-4 p.m. at 470 Center Street, Building 8-C, Chardon, OH 44024. The exam will be held in the meeting room. If you are interested in scheduling or hosting a Regional CFM Exam, please contact Alicia Silverio at (614) 265-1006 or [Alicia.Silverio@dnr.state.oh.us](mailto:Alicia.Silverio@dnr.state.oh.us).



# 2008 Ohio Statewide Floodplain Management Conference



## Getting to Know the FEMA Map Service Center

By Matt Leshner, CFM—Environmental Specialist  
ODNR, Division of Water—Floodplain Management Program

FEMA has developed the Map Service Center (MSC) as an on-line resource that offers a variety of flood map information for individuals and floodplain administrators to view and obtain flood risk information. The MSC contains all of the effective Flood Insurance Rate Maps (FIRM), Flood Insurance Studies (FIS), Flood Boundary and Floodway Maps, and Letter of Map Changes (LOMC), as well as an archive of historic FIRMs.

As with most on-line applications, there is more than one way to access the same information. The simplest option to view the current FIRM is to enter the address for the location in the “Product Search By” box on the main page. Sometimes the search result does not provide the corresponding map panel to the address provided. If that is the case, the second option is to try searching for the FIRM panel under the “Product Catalog” tab. The Product Catalog allows users to search for FIRMs, FISs and Historic FIRMs. The method for obtaining all three of the above documents is through a process of elimination, first by identifying the state, county, and then community. The Flood Boundary and Floodway Map is found by searching for the FIS under the “Product Catalog” tab. There are tutorials that provide step-by-step direction on how to navigate the Product Catalog to find the current and historic FIRMs and FISs.

The “Map Search” tab, which is found next to the Product Catalog tab, provides an option to search for flood map using a GIS based browser. For this tool the user can either enter an address or coordinates for a specific location. The result is a street level map with the specific location identified as well as a linked list of the map panel number that would cover the location. If the result is not the desired location, then the user can pan the map in the appropriate direction to find the correct map panel.

The Map Service Center allows users to print out small portions of the FIRM, called a FIRMette. A FIRMette is at 100% scale of the map panel and can be printed out on standard paper sizes. It also includes the north arrow; scale; and legend including legal title, map number, map date, and other important information. FEMA accepts the FIRMette as a legal copy of the effective FIRM panel.

There are three ways to obtain Letters of Map Change on the MSC site. The first way is using the map panel number. There can be up to eight map panel number entries under the “Quick Order” tab, which is found next to the “Map Search” tab. If there are any LOMCs for the specific map panel that was searched, then there will be a “plus sign” next to the map panel information. Click on the “plus sign” to see all the available LOMCs for that panel. The second way to search for LOMCs is by case number. Choose the LOMC bullet under the “Product Catalog” tab. The third way to obtain a LOMC is the same method described above through the locational elimination procedure (state, county, community) Selecting the “plus sign” next to the map panel will display the LOMCs for that panel.

Overall, the Map Service Center has quite a few ways to search for flood risk resources. The MSC website is found at the following address: <http://msc.fema.gov>, For questions about using the website or ordering these products by phone the MSC can be reached at (800) 358-9616.

The screenshot shows the FEMA Map Service Center homepage. At the top, there is a navigation bar with links for Product Catalog, Map Search, Quick Order, Digital Post Office, and Help. The main content area is divided into several sections:

- Product Search by...:** A search form with two tabs: "Address" and "Map Panel ID". Under "Address", there is a dropdown menu for "1) Select a Product:" (currently set to "Flood Maps"), input fields for "2) Enter an Address:" (Street, City, State, Zip), and a "Search by Street Address" button.
- New to the FEMA Map Service Center?:** A list of links for new users: Homeowners/Renters, Real Estate/Flood Determination Agents, Insurance Agents, Engineers/Surveyors, and Federal/Exempt Customers.
- What are you looking for?:** A list of search categories: Flood Maps, FIRMettes, DFIRM Databases, MapViewer - Web (DFIRM Viewer), and Documents, Publications & Forms.
- More Information:** A list of links: How do I find the flood map for my area?, What is a FIRMette?, How do I find a LOMC?, Definitions of FEMA Flood Zone Designations, Product Information, Price List, How to Order, and Need Assistance?.
- Log On:** A login form with fields for "User ID (email address):" and "Password:", and buttons for "Log on" and "Clear". There are also links for "Forgot Password?", "Register", and "Why register?".
- Announcements:** A section titled "New Fees Beginning October 1, 2007" with contact information for the MSC Customer Service Center.
- NFHL:** A section for National Flood Hazard Layer, with links to "View the NFHL Online using MapViewer - Web" and "Order NFHL GIS Datasets by state on DVD".
- San Bernardino County, California Letter of Map Revision Available:** A specific announcement with case number 08-09-159EP and effective date August 29, 2008.
- City of St. Peters, City of St. Charles, St. Charles:** A list of cities at the bottom of the page.



## Nearly 1,300 and Counting: Hazard Mitigation Works in Ohio!

By Chad Berginnis, CFM—Chief Mitigation Branch  
Ohio Department of Public Safety, Emergency Management Agency

*Editor's note: Between submittal and publication, Mr. Berginnis accepted a new position as Senior Specialist, Hazard Mitigation and Floodplain Management with Michael Baker Jr., Inc. and left his position with Ohio EMA. We at ODNR, wish him success as he moves into this new role of pursuing national interests in flood risk reduction.*

Can you guess which state is eighth nationally in the number of properties mitigated against flooding under the Federal Emergency Management Agency's (FEMA) hazard mitigation programs? If you guessed Ohio, you would be correct!

In fact, Ohio, which ranks tenth nationally in terms of the number of Federal disaster declarations, has long had a strong hazard mitigation program. Working with the ODNR – Floodplain Management Program, the Ohio Emergency Management Agency (Ohio EMA) – Mitigation Branch has been aggressively pursuing mitigation opportunities to lessen the impacts of future floods to individual families and communities. Also, past and current Governors in conjunction with the Ohio General Assembly have supplied critical assistance by providing some of the non-federal matching funds. As a result of these combined efforts, recent FEMA data shows that Ohio has mitigated nearly 1,300 properties against flooding.

Currently, the Ohio EMA Mitigation Branch is overseeing more than 50 active flood mitigation projects state-wide. These projects cover a wide range of mitigation techniques including the acquisition and demolition of two entire condominium complexes in Painesville, elevating homes in Lawrence County, and improving storm-water management in North Royalton. In fact, upon completion of the active mitigation projects, Ohio is sure to move up that national list of the number of properties mitigated.

What has been the most popular flood mitigation technique undertaken by the FEMA mitigation programs? By a significant amount, the most popular mitigation technique funded by FEMA has been acquisition/demolition. This mitigation option includes purchasing both the property and structures for fair market value. Then all structures are demolished and a permanent deed restriction is imposed to ensure that the property shall remain open space – forever. The concept is simple – permanently clear the floodplain of structures so the area can store flood waters without causing damage. A similar mitigation technique is acquisition/relocation. With this technique, the process is the same except that instead of demolishing the buildings on the property, they are relocated to a non-flood prone site. Acquisition/relocation has been funded by FEMA mitigation programs occasionally in Ohio.

The next most popular technique is elevation-in-place. This technique involves simply jacking up an existing structure, and building a new higher foundation underneath it. There are several design considerations for the elevation-in-place technique. First, if the original structure has a basement, then it must be filled. Second, if there will be a level of the structure below the base flood elevation after mitigation, then all of the "enclosure below lowest floor" design criteria apply. Essentially, that above ground enclosure must have proper openings to allow automatic flow through of flood waters and must remain unfinished (think of an area for storage and maybe parking). Elevation-in-place is easiest for smaller buildings that already have a crawl space or basement foundation, and can be more difficult for larger buildings or those on slab foundations.

Another type of mitigation project that has been successfully completed in Ohio is a retrofit project. These projects can range from dry floodproofing a non-residential building to relocating utilities out of frequently flooded areas such as a basement. In a recently completed retrofit in Bucyrus, the building components that were protected sustained no damage.

Finally, Ohio's first stormwater management project funded under a FEMA hazard mitigation program was recently approved. This project is primarily intended to upsize a stormwater drainage system for an existing residential subdivision where sheetflow off of a nearby hillside causes widespread albeit, shallow flooding. In a 2006 flood event, dozens of homes were flooded due to the inadequate storm drainage system.

*(Continued on page 12)*

(Continued from page 11)

How are these projects funded? FEMA has come a long way since 1988 when the Hazard Mitigation Grant Program (HMGP) was created. As of 2008, there are five different FEMA hazard mitigation grant programs (see related article on Unified HMA on page 14), three of which are specific to the flood hazard. The HMGP is only available after a Federal disaster declaration in Ohio, but the other four programs are annually funded. Since 1990, an average of \$6 million has been provided to Ohio communities annually for hazard mitigation.

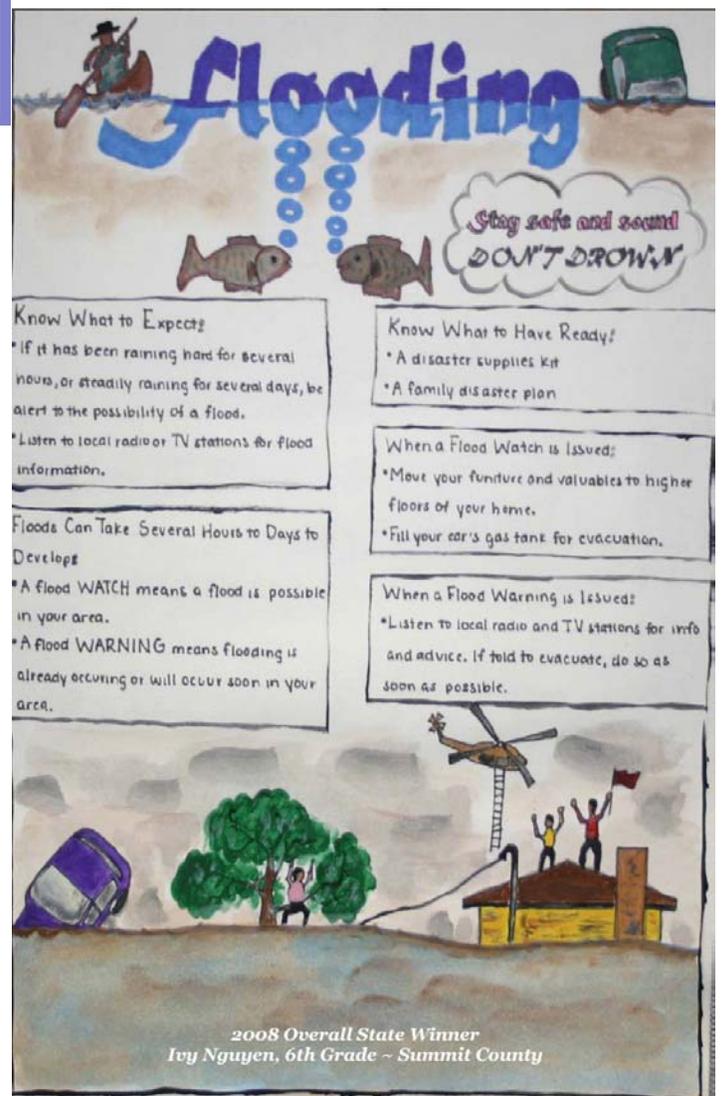
Hazard mitigation programs are potent tools to reduce flood risk when applied in conjunction with consistent implementation of NFIP requirements. Since the basic NFIP requirements also apply risk reduction standards to new as well and substantially improved development, both of these programs can dramatically assist your community to meet flood risk reduction goals. If you would like to know more about the hazard mitigation programs offered through FEMA, visit the OEMA Mitigation Branch website [www.ema.ohio.gov/mitigation.asp](http://www.ema.ohio.gov/mitigation.asp).

## Severe Weather Awareness

By Christopher Thoms, CFM—Program Manager  
ODNR, Division of Water  
Floodplain Management Program

Miss Ivy Nguyen was honored as the Overall State Winner in the *Ohio Severe Weather Poster Contest*. The Summit County sixth grader (during the 2007-08 school year) was recognized on August 9<sup>th</sup> at an Ohio State Fair ceremony as the overall state winner in the statewide poster contest. Her poster artistically illustrates flooding, flood safety, and preparedness information and includes her slogan of, **Stay Safe and Sound. Don't Drown.** The Ohio Committee for Severe Weather Awareness (OCSWA) chose her poster as the most informative, accurate, and creative out of the many posters received during the annual Severe Weather Awareness Poster Contest.

As the overall state winner, Ivy received a variety of awards and prizes from the committee and its partners, to include a \$100 savings bond, a letter of congratulations from Governor Ted Strickland, a plaque from the National Weather Service, a disaster supply carrying case, and an American Red Cross First Aid Kit. Also, later in the fall, her school will receive an engraved "traveling" trophy to showcase for the remainder of the school year. In an effort to promote severe weather preparedness, the committee will feature Ivy's poster throughout the year and during the two Severe Weather Awareness Week campaigns on their website: [www.weathersafety.ohio.gov/](http://www.weathersafety.ohio.gov/).



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This year, 37 students from 15 Ohio counties were honored as regional winners. The students represented grades 1-6 from 18 schools. As regional winners, every student artist receives a certificate from the National Weather Service and a duffel bag of prizes from the organizations and agencies that make up OCSWA.

Each year the committee sponsors the Poster Contest and two *Severe Weather Awareness Weeks*. November 16-22 is this year's Winter Severe Weather Awareness Week in Ohio and March 22-28 is proposed for next Spring's campaign. During both campaigns, radio and television stations across the state will run public service announcements promoting severe weather awareness. We encourage you to take advantage of these opportunities to increase severe weather safety for your community.

**2008 Overall State Winner Ohio Committee for  
Severe Weather Awareness**

*Ivy Nguyen*  
**Summit County Sixth Grader**



Pictured with Ivy Nguyen (center) are OCSWA Committee Representatives (left to right) American Red Cross Russell Robinson; Summit County EMA Director, Annette Petranic; Floodplain Management Program Supervisor, Christopher Thoms, ODNR; OEMA Executive Director Nancy Dragani; and National Weather Service, Cleveland Meteorologist-In-Charge, William Comeaux

(Kelli Blackwell OEMA photographer)

**WMAO Annual Conference**

The Water Management Association of Ohio (WMAO) is hosting its 37th Annual Conference with the theme "Water for a Changing Ohio" on November 12-13, 2008 at the Ramada Plaza Hotel and Conference Center. Please visit [www.wmao.org/meetings.shtml](http://www.wmao.org/meetings.shtml) for a complete agenda and additional conference information."

## The Unified Hazard Mitigation Assistance Program

By Steve Ferryman, CFM—Environmental Specialist  
ODNR, Division of Water—Floodplain Management Program

The Federal Emergency Management Agency (FEMA) has recently unified the guidance for its four pre-disaster grant programs into one document titled, *Unified Hazard Mitigation Assistance (HMA) Program Guidance*. This guidance document contains requirements for projects funded through the HMA programs: Pre-Disaster Mitigation (PDM), Flood Mitigation Assistance (FMA), Repetitive Flood Claims (RFC) and Severe Repetitive Loss (SRL). The intent of this alignment is to enhance the quality and efficiency of the grant awards.

### Unified HMA Application Includes the Following Programs:

- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)
- Repetitive Flood Claims (RFC)
- Severe Repetitive Loss (SRL)

**Applications for HMA funding must be submitted into e-Grants before 5:00 p.m. on November 10, 2008 for the FY 2009 cycle.** The e-Grant system is a web-based grant management system that allows federal, state and local governments to apply for and manage their mitigation grant application processes electronically. Applicants must register to use the e-grants system. Information about registering to use the e-grant system and additional HMA guidance can be found on the Ohio Emergency Management Agency’s website: <http://www.ema.ohio.gov/mitigation.asp>. The Ohio Emergency Management Agency will work with communities to fine tune their applications before final submittals are due to FEMA, December 19, 2008.

Table 1 was taken from the new HMA guidance document and illustrates some of the different projects that can be funded through the HMA programs. The cost share for each program varies and ranges from 25% non-federal match to 100% fully federal funded in the RFC program. Unless you are applying for funding to develop a local mitigation plan, all HMA programs (except RFC) require a FEMA-approved and adopted local mitigation plan by the application deadline.

If there are any questions regarding whether a project may be eligible for mitigation funding through one of these programs or putting together an application, contact Steve Ferryman at (614) 265-6732. 

| Mitigation Project  | PDM | FMA | RFC | SRL |
|---|-----|-----|-----|-----|
| <b>1. Property Acquisition and Demolition or Relocation Project</b> |     |     |     |     |
| Property Acquisition and Demolition or Relocation                   | ✓   | ✓   | ✓   | ✓   |
| <b>2. Construction Type Projects</b>                                |     |     |     |     |
| Property Elevation  | ✓   | ✓   | ✓   | ✓   |
| Mitigation Reconstruction <sup>1</sup>                              |     |     |     | ✓   |
| Localized Minor Flood Reduction Projects                            | ✓   | ✓   | ✓   | ✓   |
| Dry Floodproofing of Residential Property <sup>2</sup>              |     | ✓   |     | ✓   |
| Dry Floodproofing of Non-residential Structures                     |     | ✓   | ✓   |     |
| Stormwater Management   | ✓   | ✓   |     |     |
| Infrastructure Protection Measures                                  | ✓   |     |     |     |
| Vegetative Management/Soil Stabilization                            | ✓   |     |     |     |
| Retrofitting Existing Buildings and Facilities (Wind/Earthquake)    | ✓   |     |     |     |
| Safe room construction  | ✓   |     |     |     |
| <b>3. Non-construction Type Projects</b>                            |     |     |     |     |
| All Hazard/Flood Mitigation Planning                                | ✓   | ✓   |     |     |

**Table 1: HMA Eligible Projects**  
(FEMA Hazard Mitigation Assistance Program Guidance; June 19, 2008; page 5)

## How much is that little stream worth?

By Kimberly Bitters, CFM—Environmental Specialist  
ODNR, Division of Water—Floodplain Management Program

Often the public and local officials have a general sense of the intrinsic value of our waterways, but that ideal is pushed to the bottom of the priority list when the community is confronted by financial realities. This does not have to be the case if we stop to evaluate the benefits of stream preservation and realize the numerous funding opportunities available.

Both the public and private value of our natural streams is much more than the just intrinsic value. The benefits of maintaining a natural stream corridor are numerous, however, they are difficult to quantify. Just some of those benefits include making space for flood water storage, improved water quality, maintenance of green infrastructure, and erosion control. A starting point may be to identify the quantifiable economic benefits and costs to preserving these natural amenities. Once we put a dollar value on the benefits to preservation, we may find that we can't afford to lose our remaining natural streams to make way for new development.

While there are many ideas on how best to categorize these economic benefits, actually performing the calculations and determining a dollar value is much more difficult. Below is a general discussion on a few of the simplest ways to quantify the benefits of preserving a natural stream, with the goal of introducing each category and pointing you to additional resources to assist in your evaluation. Numerous studies have been produced on all of these subjects and can be used to help structure your evaluation.

To begin assessing your community's economic benefit for preserving the remaining natural stream corridors, you should consider both the public and private values. Simply locating development further away from a flooding source will reduce damages as well as maintain the natural flood water storage capacity of the floodplain. Some of the less obvious functions of an undisturbed stream corridor include the natural ability to absorb more water before it gets to the channel and slow the movement of water as it moves towards the channel. These benefits are achieved only with maintenance of a sufficient number of native plants as well as natural meandering of both the main channels and smaller tributaries. Ohio's riparian plant species often have deep roots that create breaks in the soil surface to allow water absorption. These plants also create additional ground friction that slows the water down, allowing

### Benefits of Preserving a Natural Stream Corridor

- Flood water storage
- Green infrastructure
- Recreation and Ecotourism
- Water quality improvement
- Bank stabilization
- Erosion control
- Adjacent real estate value
- Noise reduction
- Groundwater recharge
- Ecosystem integrity
- Reduced site development cost

more of it to find alternative pathways to groundwater sources. Plant transpiration also reduces the amount of water that ever gets to the stream. All of these natural functions result in moderated velocity and peak flow—in other words—the water has a better chance of being contained within the channel and the occurrence of excessive overland flooding events is reduced. So, through stream preservation, we will not only reduce the number of flooding events, but also reduce the flood heights of those events that do occur. Dissipated flood flows mean a reduced impact area and ultimately less damage to your citizens' property.

Thus, we can measure the flood damage costs *not* incurred because of the natural flood reduction value of the natural stream corridor. The savings associated with avoided flood damages is one of the most straight forward ways to quantify the potential associated with preserving a natural stream corridor. To quantify these savings use your community land use plan and zoning code to identify expected structural densities and values. County auditor land and structural values are also a good source of information for comparison purposes. In addition, ODNR produced the Ohio Structure Inventory a few years ago, which can be used to identify the number of existing structures in high risk areas as well as their proximity to the flooding source. Free HAZUS software can also be used to quantify the number and value of existing structures that will benefit from the maintenance of a natural stream corridor.

Improved water quality is another important benefit of maintaining a natural stream corridor. Those benefits directly apply to both human and wildlife populations. The cheapest path to improved drinking water quality is preserving the natural function of the vegetated stream corridor. Through nature's intricate filtration system, riparian vegetation removes sediment,

*(Continued from page 15)*

nutrients, and toxic chemicals from fresh water sources. To obtain this benefit we must have a diverse system of riparian species – a mowed lawn is simply not going to provide the same kind of benefit. Other related benefits from a riparian filtration system includes reduced algae blooms in feeder ponds, lower levels of chemicals in drinking water, and enhanced habitat and ecological integrity to perpetuate this cycle.

When discussing natural stream corridors, “green infrastructure” refers to the fact that our streams and the adjacent land areas represent a valuable functioning amenity to society. Infrastructure is often narrowly considered as the man-made backbone to our built environment including roads, bridges, utility lines, *etc.* That perspective misses the valuable services that our stream corridors can represent if we give them the proper protection. Some of the most fertile soils can be found directly adjacent to our streams. Thus, there are particularly important implications for preserving green infrastructure to both agriculture and the food chain as a whole. Streams are natural highways that act as travel corridors for migrating birds and other species providing valuable service to wildlife; however, this service benefits people by reducing the “pests” that are forced to travel through our neighborhoods. Recreational and aesthetic opportunities that depend upon high quality natural stream corridors are intrinsically and economically valuable to all of us, both now and in future generations. Because terrestrial and aquatic systems are intricately connected, the areas that have been preserved as small, isolated natural parks are not going to provide a lasting natural amenity. If the natural areas surrounding our parks are ecologically degraded, the quality of our preserved areas will suffer as well.

Recreation-based tourism represents a significant portion of the economy in many Ohio communities. Many times, the integrity of our natural systems is critical to maintaining the tourism sector of the economy in these communities. The US Census Bureau produces an economic census that is easily accessible and can provide some of the information needed. However, the direct economic benefits of recreation-based tourism are not the entire picture. The economic trickle-down effect of what is sometimes referred to as “eco-tourism” must be considered as well.

Erosion control and bank stabilization are two facets of an underlying problem – the naturally regulated dynamic system of channel meandering is not convenient for development purposes. Traditional methods to control this process such as channel armoring

require constant maintenance and increasingly damage our natural systems. However, preservation of a natural stream corridor can allow for some of these natural changes without adverse impacts and allow for some self-regulation of the associated problems. Our watercourses and the surrounding land areas create a dynamic, changing landscape where channels migrate widely, soil is arranged and rearranged, and the vegetation is in a constant state of flux through succession patterns. Vegetation along the streambank will trap soil particles, reduce bank erosion, and minimize disturbance along valley slopes—for free. In addition, the vegetative cover will deflect stormwater runoff and minimize the displacement of soil downstream. This slows the meandering process, which keeps the channel from drastically relocating and potentially undercutting infrastructure or homes.

Real estate values are increased by proximity to natural amenities such as an unspoiled natural stream corridor. Whether it is a result of the view, access to recreation, the intangible feeling associated with a connection to nature, or some other reason – people will pay more to live near a natural stream corridor. As a result, open space and conservation-based developments have been springing up as a valuable alternative to the traditional suburban subdivision all over Ohio and the rest of the country. By preserving a small natural stream corridor, the nearby development potential will dramatically increase in value.

There are costs associated with meeting existing water quality standards in developed stream corridors. By setting aside a stream corridor to be left undeveloped, you will reduce the costs of silt fencing, monitoring, reporting *etc.* that must be borne by both the developer and the community. Some of these costs are associated with meeting the regulatory requirements for TMDL, MS4, 404, and 401 permits. Also, the costs of mitigating wetland and endangered species impacts could be partially or completely avoided. Other costs that might be avoided are those associated with other regulatory requirements such as dewatering the project area, wildlife compensation, environmental review, State Scenic River approvals, levee approvals, and others.

Once you have determined the value of your natural streams by comparing costs and savings, it is up to you to decide what to do with this information. If your community decides to pursue preservation, the following approaches could be used. Outright purchase of the riparian corridor can be accomplished with the help of many different funding sources. A popular and legally viable way to preserve water resources is to create a riparian buffer along your watercourse

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(see related article *The Antediluvian*, Summer 2007, page 6). Riparian buffers can be created through adopting a vegetated setback requirement into a variety of different codes or deeding conservation easements with qualitative maintenance requirements.

Many of the ecological benefits discussed above also have direct economic value. By protecting the natural functions of the stream corridor, there are a variety of ways that property owners can directly obtain a finan-

cial gain. For example, transfer or purchase of development rights allows for the owner to make a profit while protecting the sensitive stream corridor. This can be accomplished through purchase of conservation easements, density transfers, and programs such as floodplain or wetland mitigation banking.

For additional information on assistance with preserving the natural stream corridor contact local resources including OSU Extension, watershed groups, conservancy districts, local land trusts, or county, state, or federal conservation partners.



## Fall 2008 Map Modernization Update

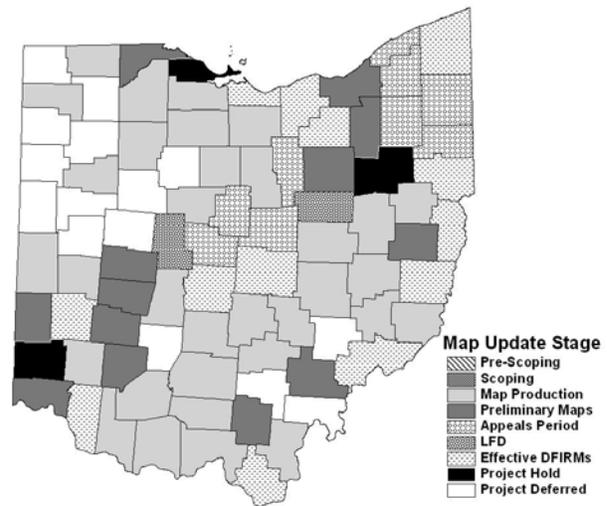
By Jonathan Sorg, CFM—Environmental Specialist  
ODNR, Division of Water—Floodplain Management Program

FEMA’s Map Modernization Initiative is nationwide, with a projected need of one billion dollars to support the goal of modernizing the nation’s inventory of flood maps. The ODNR-Division of Water, Floodplain Management Program is coordinating the state’s involvement. Until the initiative is finished, *The Antediluvian* will regularly carry this feature, highlighting the status of flood map updates that are ongoing.

Seventy-three counties have begun the map update process to-date. The figure below better illustrates the process and each county’s current stage of map update.

ODNR recently received information from FEMA Region V regarding Map Modernization funding for Fiscal Year 2008. The Region received a lower level of funding than anticipated earlier in the fiscal year, and several county projects were deferred indefinitely. ODNR provided input to FEMA regarding the rationale used for flood risk priorities, and FEMA compromised on the counties selected. These counties will be priorities with future funding for continuing Map Modernization past Fiscal Year 2008. Counties recently deferred include: Auglaize, Logan, Meigs, Mercer, Putnam, and Shelby.

All *Pre-Scoping Activities* and *Scoping Meetings* are completed for this phase of Map Modernization. *Scoping Meetings* were recently conducted with the following counties: Allen, Auglaize, Crawford, Darke, Defiance, Fulton, Hancock, Hocking, Huron, Logan, Marion, Mercer, Miami, Perry, Pike, Putnam, Sandusky, Scioto, Seneca, Shelby, and Wood. (Please note that five of these county projects were deferred,



**Figure 1: This figure represents each county’s current stage in the map update process.**

as mentioned above.)

Counties in the *Map Production* phase are: Adams, Allen, Brown, Carroll, Coshocton, Crawford, Darke, Defiance, Fairfield, Fulton, Gallia, Guernsey, Hancock, Highland, Hocking, Huron, Madison, Marion, Miami, Monroe, Muskingum, Noble, Perry, Pickaway, Pike, Richland, Ross, Sandusky, Scioto, Seneca, Tuscarawas, Warren, and Wood.

FEMA has issued new flood mapping guidance for areas landward of levees currently shown as being protective to the 1-percent-annual-chance flood.

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Communities with this type of levee will be required to provide adequate documentation that their levees were built and maintained in accordance with FEMA standards. Four county updates have been delayed until they provide such documentation for their levees: Butler, Ottawa, and Stark.

*Preliminary Maps* have been issued for Ashland, Athens, Champaign, Clark, Clinton, Cuyahoga, Delaware, Geauga, Greene, Hamilton, Harrison, Jackson, Knox, Lake, Lucas, Mahoning, Morrow, Portage, Preble, Summit, Trumbull, and Wayne counties.

The *Appeals Periods* have begun for Ashland and Wayne counties. *Appeals/Comment Periods* have ended recently for Delaware, Harrison, Portage,

Summit, and Trumbull counties.

The following *Letters of Final Determination* have been issued: Holmes County (effective December 8, 2008) and Union County (effective December 16, 2008).

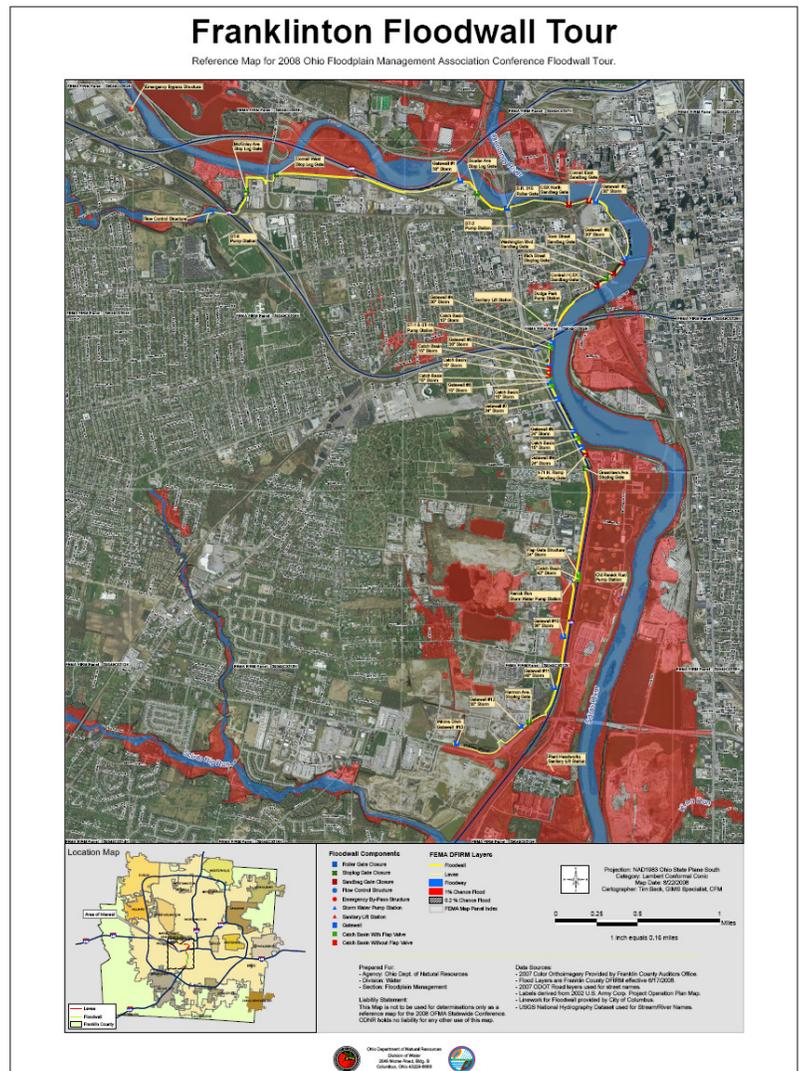
Thirteen counties presently have effective DFIRMs in Ohio: Ashtabula, Belmont, Clermont, Columbiana, Erie, Franklin, Jefferson, Lawrence, Licking, Lorain, Medina, Montgomery, and Washington.

Should you have any questions about the map update process, or Map Modernization in Ohio, please contact ODNR's Jonathan Sorg at (614) 265-6780 or [Jonathan.Sorg@dnr.state.oh.us](mailto:Jonathan.Sorg@dnr.state.oh.us). Also, please visit our website at [www.ohiodnr.com/tabid/3522.aspx](http://www.ohiodnr.com/tabid/3522.aspx).

### Editor's Note:

Tim Beck, ODNR, DOW, Floodplain Management Program received 3rd place in the General Reference Category for the Ohio GIS Conference Map Gallery Competition. The winning map dimensions were 44x34 inches. The category included GIS depictions of a geographic feature(s) or jurisdiction(s), county highway map, trails, utilities, natural resources, etc. The conference was held at the Crown Plaza Hotel, Columbus North in Columbus, Ohio on September 10-12, 2008.

Originally, the map was created for the Ohio Statewide Floodplain Conference's West Columbus Local Protection (Franklinton Floodwall) Tour held on August 28, 2008. Twenty-four conference participants were shuttled by charter bus from the conference to four floodwall locations. Bob Ellinger, Manager and Mike Foster, Tech Support Manager both of the City of Columbus Sewer Maintenance Operations Center shared their many years of experience while guiding the tour. Stops along the tour included the Columbus Sandbag Facility, Greenlawn Avenue Stoplog Closure, Dodge Park Combined Sewer Pump Station, and the SR 315 Roller Gate Closure. Thanks to Bob, Mike, and Tim for all their hard work in making this tour successful.



## A Little Giant

By Christopher Thoms, CFM  
Program Manager—ODNR, Division of Water  
Floodplain Management Program



On September 30, 2008, Cynthia J. Crecelius retired from her career of thirty years with the Ohio Department of Natural Resources. As with Senator Stephen Douglas, who was known as the Little Giant, she may not be tall but she is a *giant* in floodplain management. Well-known among floodplain management professionals in the state and the nation as a resourceful manager and an adroit, intricate strategist, Cindy and her talents will be greatly missed.

Coming to ODNR as a college intern in 1978, Cindy remained in the department ever since. Cindy has served the Floodplain Management Program for the last twenty-four years. Created in 1970, Ohio's floodplain management program suffered severe cutbacks even as it was being formed. As Cindy relates in her tribute to his career (*The Antediluvian*, Vol VIII Issue 2 page 2), Peter Finke, in a remarkable effort, both built and rebuilt the program. He secured FEMA funding to staff essential efforts including technical assistance and flood hazard education while establishing the credibility of Ohio's Floodplain Management Program in both state and nation.

In October, 1984, Peter hired Cindy as one of only two planners. She hit the ground running and soon established the framework for how our office provides community assistance. The scope and precision of those practices still are essentially those Cindy established and, FEMA still uses Ohio's (Cindy's) processes as examples of excellence.

In 1998, with Peter's promotion to Deputy Chief, Cindy was named Program Manager and the State Coordinator of the National Flood Insurance Program. Throughout his career, Peter worked to create a strong state floodplain management program, in harmony with the NFIP and national floodplain management strategies. Mark Ogden, Administrator of the division's Water Management Section, commented, "Cindy has taken the foundation established by Peter and continued developing a strong program. It will be impossible to replace Cindy, but her legacy of strategic planning and innovation for floodplain management will continue to serve Ohio's citizens for years to come." Cindy regularly reminded us of the debt we owe to Peter for laying such a solid foundation and the responsibility we have, to build on that foundation an even more effective, efficient, and responsive floodplain management program for our state. Cindy maintained the focus on our mission: reduce flood risk and protect the floodplain resources. She continued the work to strengthen flood damage reduction legislation, promote higher standards and resource protection. Anyone who has heard Cindy speak about Ohio's Floodplain Management Program will know, three goals our program endeavors to reach are: effective customer service, effective education, and effective partnerships. *Effective* being the recurring theme for which, we continue to strive and occasionally receive recognition.

In 2002, we were awarded the Platinum Level - *Tom Lee State Award for Excellence* by Association of State Floodplain Managers (ASFPM) in recognition of outstanding floodplain management programs or activities at the state level. In accepting the award, Cindy noted that the effectiveness of the program is due to the many partners, resources, and creative energy behind their products and services. She has helped build and maintain these partnerships and in large part because Cindy's vision for Ohio's Floodplain Management Program is long-term, these partnerships continue to grow. They include working to guide national policies which, of course affect Ohio and include her participation on ASFPM's Certification Board of Regents to promote professional development of floodplain managers (see [www.floods.org](http://www.floods.org)). They also include initiating the framework for working in concert with OEMA and the Ohio Building Officials Association in post-disaster events (see related article *The Antediluvian* Vol XIV Issue 2 page 19) and her early participation on the Ohio Committee for Severe Weather Awareness (see related article page 12).

A list of all the honors Cindy has received in recognition of her long service on behalf of Ohio and floodplain management would fill a newsletter. Even more numerous are the other *marks of distinction* that she has acquired over the years. As she wisely reminded me while we were going into a meeting where the result was not going to be good for flood risk reduction, *Sometimes you get the bear, sometimes the bear gets you. Today, we're not getting the bear.* Despite that she did not always *get the bear*, she did not give up trying and we all are the beneficiaries. I appreciate the opportunity afforded me to have worked with Cindy all these years and along with the current staff will remind anyone who does not have the privilege to know it first hand, we all owe a debt to the vision, career, and accomplishments of a little giant.



# ***The Antediluvian*** .....

## ***Ohio's Floodplain Management Newsletter***

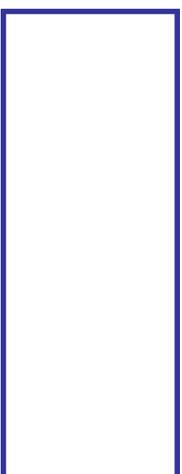


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Deborah F. Hoffman, Chief



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Kimberly M. Biters, Editor.

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