

The Antediluvian

Ohio's Floodplain Management Newsletter

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



Volume XIV

Fall 2007

Issue 2

Floating Homes Submerged in Debate

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

One of the latest trends to hit Ohio's waterways is floating homes. Already found in states such as California, Tennessee, and Oregon, these are homes built on floating platforms that are moored or anchored. Some people confuse floating homes with houseboats, but houseboats are designed to be used as a means of transportation on water.

Discussions have ensued between local, state, and federal entities regarding whether floating homes can be regulated via National Flood Insurance Program (NFIP) standards or building codes. Some developers in Ohio are touting floating homes as advantageous investments since there are few regulations that apply to them. However, local officials need to be sure to protect the health, safety, and welfare of their citizens who wish to place a floating home in a local waterway.

In terms of NFIP criteria, the proposed placement of a floating home in the special flood hazard area would require a floodplain development permit. Also, proposed placement in an identified floodway would require the developer to meet 44CFR 60.3(d) (3), which is the *no-rise certification* through an impact analysis. However, some officials have said that floating homes may not meet the NFIP's defini-

tion of "structure." According to 44CFR 59.1, a structure is "a walled and roofed building... that is principally above ground..." Floating homes are on water, and therefore may not be considered "principally above ground." If these homes don't meet this definition, standards like anchoring, flood resistant materials, and floodproofed utilities may not have to be met.

Conversely, if a floating home meets the definition of "structure," another big question would arise. How could it be constructed to have the lowest floor elevated to or above the base flood elevation (BFE)? Since a floating home rises and falls with water elevations, the only way for its lowest floor to be at or above the BFE would be during a flood equal to or in greater magnitude than the base flood. Therefore, one may never meet the standard and never be compliant. Additional NFIP issues may include: emergency access during a flood; impacts of larger floods on the dwelling; and impacts of floating debris or waves on anchoring.

In terms of building codes, most codes do not have *specific* standards that deal with construction and placement of floating homes. Such dwellings must be structurally stable, have adequate and safe utility connections, and all installed systems (*i.e.*, sewage) must be code compliant and maintained. How can local officials ensure these standards are met without *specific* requirements?

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2008 Ohio Statewide Floodplain Management Conference

The Columbus, A Renaissance Hotel
August 27-28, 2008

See insert for the 2008 Call for Abstracts.

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According to the Ohio Board of Building Standards (OBBS), the organization at the forefront of the floating home issue in Ohio, building codes allow for alternative engineering compliance methods. This means that an experienced professional engineer can provide a design that potentially meets standards like stability and utility connections. A big task with this method is translating building codes for land dwellings into codes for water dwellings. Some factors not affecting land dwellings that should be considered include: impacts of movement on utilities connections; impacts of wave action on the dwelling; and impacts

of load distribution changes.

One of the immediate goals of the OBBS is to develop a list of those factors that need to be taken into account during construction and placement of floating homes. In the interim, the OBBS may be a great resource for any local official faced with such development issues.

What do you think about these issues? Have you experienced this type of development in your community, and if so, how did you handle it? Please feel free to contact ODNR's Jonathan Sorg at (614) 265-6780 or Jonathan.Sorg@dnr.state.oh.us with your answers.

Alteration of a Watercourse

By George Meyers, P.E., CFM—Floodplain Engineer
ODNR, Division of Water—Floodplain Management Program

Communities that participate in the National Flood Insurance Program (NFIP) have agreed to adopt and enforce regulations that restrict certain types of development within areas identified by the Federal Emergency Management Agency (FEMA) as the 1% annual-chance floodplain. One of the required regulations that our office continually gets questions about is the requirement for an alteration to a watercourse. In 44CFR60.3(b)(7), FEMA requires communities to “assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.” Every community that participates in the NFIP should have a requirement in their local regulations that addresses this standard.

The ODNR Floodplain Management Program offers the following guidance as the minimum necessary for communities to participate in the NFIP. Communities may also adopt and enforce floodplain development standards that are more stringent than FEMA's minimum criteria, or in some cases, choose to interpret their regulations more strictly than FEMA. If a community adopts more stringent standards or applies a more stringent interpretation of FEMA's criteria, it is important that the community do so consistently.

To determine if the watercourse has been altered, we must first decide what is considered the watercourse. For instance, is the entire floodplain considered the watercourse, or is it only the channel? FEMA has clarified that they consider a watercourse to be altered when any change occurs within its banks. Development that occurs outside of the channel banks, while it may be subject to other requirements, is not

considered an alteration of the watercourse.

So, a watercourse is altered if any change occurs between its banks. This sounds easy. But is it? Upon closer consideration, how do you determine where the banks of the channel are?

In some locations it can be fairly easy to identify the banks of the channel. However, in many parts of the state the stream morphology may create a situation where it's not so easy to determine. Perhaps the channel has a low floodplain on one side, but is bounded by a steep hill on the other. Or maybe the channel is deeply entrenched with multiple terraces in the adjacent floodplain. In order to apply the standard consistently, we need an objective way to determine what is considered the channel.

There are many publications available that discuss methods of defining a watercourse. What is most important is that your community is consistent in application. Some programs, such as the U.S. Army Corps of Engineers Section 401 permit program, use a determination of the “ordinary high water.” The USDA Forest Service has published a General Technical Report titled *Stream Channel Reference Sites: An Illustrated Guide to Field Technique*, published April 1994. It is available for download from the ODNR Division of Soil and Water Conservation website at: www.ohiodnr.com/Portals/12/water/streammorphology/RM245E.pdf. Chapter 7 discusses field characteristics that can be used to determine the extent of the bankfull watercourse.

Once the location of the watercourse has been determined, the next step is to evaluate the project to see if it is causing any change within the channel banks. If the project does not physically alter the watercourse within its banks, the alteration of watercourse stan-

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dards should not apply. Projects that provide a clear span of the channel, such as an adequately sized bridge or culvert, would not be considered an alteration of the watercourse.

If a project will alter the watercourse, the applicant must submit an engineering analysis that demonstrates that the project has not reduced the flood carrying capacity of the watercourse. The analysis should determine the existing capacity of the channel, assuming that it is flowing full to the top of bank. This is typically referred to as "bankfull flow." Once the existing rate of flow (typically calculated in cubic feet per second) is known, the engineer can determine the depth for the proposed conditions using the same rate of flow. As long as the water surface elevations for the proposed condition have not exceeded the water surface elevations for the existing condition (based on

the bankfull flow) the project can be considered to maintain the carrying capacity of the watercourse.

In areas where base flood elevations have been established and a floodway has been delineated, increases in flood heights resulting from encroachment on the floodway are prohibited. The floodway must always contain the channel and will usually consist of some of the adjacent floodplain. In these situations, a more detailed impact analysis typically will be required. Generally, if the floodway encroachment standards have been satisfied, that would be sufficient to demonstrate that the alteration of watercourse standards have also been satisfied.

Projects that alter or relocate a watercourse can also affect the natural stability of the watercourse. Long-term maintenance may be necessary to ensure that the watercourse will continue to have the same carrying capacity as the pre-project condition.



A Glance at the NFIP's History: 1968 - 2007

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

Damage related to flooding, costs more than any other type of natural disaster on a yearly basis. Early attempts to control flooding included physical alterations to waterways. These projects however, are expensive both to construct and maintain. During the late 1950's, Congress authorized a study to consider the cost benefit ratio of these flood protection structures. The study concluded that their investments in structural flood control had not significantly reduced the amounts allocated for flood-related disaster assistance. Consequently, alternative methods for flood risk reduction were considered.

In 1968 Congress passed the National Flood Insurance Act creating the NFIP. Initially the Federal Insurance Administration (FIA) administered the NFIP, which was within the Department of Housing and Urban Development (HUD). About 2,000 communities joined the NFIP in the first few years. This optional program did not entice a large percentage of flood-prone homeowners. Therefore, federal disaster assistance was still the primary source of financial relief for flood damages with the insurance program having a relatively small impact.

The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for structures that are both located in the special flood hazard area

and had a federally backed mortgage. This policy change dramatically increased the NFIP's role in floodplain management nationwide. By the end of the 1970's, there were more than 15,000 communities participating in the NFIP and about two million flood insurance policies in force. In 1979 many separate disaster-related responsibilities were merged into the Federal Emergency Management Agency (FEMA).

Since November 1993, FEMA's Mitigation Division has managed the NFIP. Following the flooding events in the Midwest in the summer of 1993, the National Flood Insurance Reform Act of 1994 was enacted. The Reform Act took many strides forward in strengthening compliance with the mandatory purchase requirements. The 1994 Act also led to the development of the Flood Mitigation Assistance Program (FMAP). With help from the FMAP, many communities have developed flood mitigation plans to reduce damages related to flooding. Since 2003, the FMAP funds have been focused on projects that include repetitive loss structures. In 2004 the Flood Insurance Reform Act established a program that provided communities financial assistance to mitigate severe repetitive loss structures. Severe repetitive loss structures have experienced multiple insurance claims over \$5,000, with at least two claims occurring in a ten-year period; or two claims on the structure have exceeded the value of the structure within a ten-year period.

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In March of 2003, FEMA and 22 other federal agencies, programs and offices were merged together to form the Department of Homeland Security. The 2007 Flood Insurance Reform and Modernization Act moves the NFIP toward actuarial premium rating. Also, penalties are raised for lenders who fail to enforce mandatory purchase requirement, increases program participation incentives, allows FEMA to increase flood insurance rates by 15% a year (up from

10%), and increases the program's borrowing authority to \$21.5 billion from \$20.8 billion.

As the NFIP evolves, adjustments are made to improve the effectiveness of the program. Currently, enhancing the financial stability of the insurance component, recognizing flood map modernization as an ongoing investment, and improving flood mitigation programs to be more effective are some of the areas that are being looked into to strengthen the NFIP.

Communicating Flood Risk

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

Local floodplain administrators are in the risk communication business. They are the local experts on interpreting FEMA flood maps that identify high-risk flood hazard areas (100-year floodplains). They are the local experts on the administration of flood damage reduction regulations, which are designed to reduce flood risk for structures built in high-risk flood hazard areas. This knowledge provides frequent opportunities to discuss flood risk with homeowners, government officials, and builders. During these interactions, it is sometimes easy to lose site of the big picture. Instead of focusing on risk management, the conversation often turns to "I've lived here thirty years and it has never flooded" or "how can I get out of paying flood insurance?" These statements (and others like them) provide an opportunity to educate individuals about flood risk.

Despite efforts at all levels of government, flood damage continues to rise. Ohio has had 10 Presidential Disaster Declarations in the past four years. Since 1964, flood damages (excluding insurance claims) have resulted in \$438 million in damages (2006 dollars). The total cost of the late August 2007 flood event in northwest Ohio are not final yet, but are expected to add tens of millions to Ohio's flood damage total.

Time Period	Chance of Flooding over a Period of Years			
	10-year	25-year	50-year	100-year
1 year	10%	4%	2%	1%
10 years	65%	34%	18%	10%
20 years	88%	56%	33%	18%
30 years	96%	71%	45%	26%
50 years	99%	87%	64%	39%

The National Flood Insurance Program was created in an attempt to shift some of the financial burden from the U.S. taxpayer to the individuals that chose to live in high-risk flood hazard areas through utilization of flood insurance as opposed to disaster assistance. The mandatory purchase of flood insurance was established in 1973 because even after people were

flooded, they were not voluntarily purchasing flood insurance. However, the mandatory purchase requirement only applies to structures in high-risk flood hazard areas that have a federally backed mortgage. Many lending institutions are just now beginning to adequately enforce mandatory flood insurance purchase requirements as a result of the NFIP Reform Act of 1994. In Ohio, there are an estimated 140,000 structures in high-risk flood hazard areas. Only 30% of those structures have flood insurance policies. Citizens should be encouraged to take responsibility for their decision to live in high-risk flood hazard areas.

Purchasing flood insurance is the most effective way to mitigate the economic risk of living and building in a high-risk flood hazard area. Federal disaster assistance is only available if the event results in a Presidential Disaster Declaration; however, most flood events do not. Alternately, a flood insurance claim can be filed regardless of whether the flood results in a Presidential Disaster Declaration. Flood insurance claims are usually paid quicker than post-disaster loans can be processed. This speeds up the recovery process for those with flood insurance policies. Many citizens are not aware that Federal disaster assistance is usually in the form of a loan that must be

paid back with interest. For example, a \$50,000 disaster assistance loan at 4% interest would translate into a monthly payment around \$240 per month for 30 years. Compare that to

\$100,000 of flood insurance coverage, which costs about \$33 per month.

Map Modernization is more accurately defining high-risk flood hazard areas in remapped communities.

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Unfortunately, most people have never looked at a flood map; but even if they know their flood zone, they often do not understand the risk of owning a structure in a high-risk flood hazard area. To complicate matters, a structure's flood risk will vary depending on the location within the floodplain and the elevation of the lowest floor. For example, it is possible that a structure located in the 100-year floodplain will be flooded annually if the lowest floor is at natural grade. Depending on the elevation of a structure located in a high-risk flood hazard area there is anywhere from a 26%-96% chance that the structure will be flooded during a 30-year period (see table on page 3). There is only a 1-2% chance that the same structure will catch fire during the same 30-year period, but most homeowners don't even question the need for fire insurance. Floodplain administrators need to publicize local flood hazard maps and be prepared to discuss the flood risk that these maps illustrate. Citizens that are educated about flood risk will be more open to community efforts to manage that risk effectively.

It is human nature to think that flooding is something that only happens to people on the news. Even if a home is located outside of a high-risk flood hazard area, there is still flood risk. In fact, people living in moderate to low-risk flood hazard areas file 30% of all flood insurance claims. Flooding can happen anywhere, even if you are miles from the nearest stream or other flooding source. Flooding also occurs behind levees that fail, or levees designed to protect people from a certain flood level. Congress is currently considering expanding the mandatory purchase requirement to include some or all of these moderate-to-low risk areas as depicted on FIRMs.

The NFIP website has a tool that helps citizens identify their flood risk and suggests steps to reduce flood risk: www.floodsmart.gov/floodsmart/pages/learnbasics.jsp. This website also contains information that can help local floodplain administrators educate the public to see FEMA flood maps as more than tools to determine if flood insurance is required for a certain structure. Educating local politicians and citizens about flood risk will lead to government actions that result in more sustainable communities. 

Flood Mitigation Funding Opportunity

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

Attention Ohio Floodplain Managers!

The Ohio Emergency Management Agency (Ohio EMA) wishes to notify you of the nationwide Pre-Disaster Mitigation (PDM) grant program for federal Fiscal Year 2008. This Federal Emergency Management Agency (FEMA) program focuses on planned, pre-identified, and cost-effective mitigation projects that lessen the impacts of hazards on people and property. Projects funded under PDM include several that relate to flood mitigation:

- Voluntary acquisition of flood prone property (*i.e.*, structures and land, where necessary) for conversion to open space in perpetuity;
- Relocation of flood prone public or private structures;
- Elevation of existing public or private structures to avoid coastal or riverine flooding;
- Structural retrofitting and non-structural retrofitting (*e.g.*, storm shutters, hurricane clips, bracing systems) of existing public or private structures to meet or exceed applicable building codes relative to hazard mitigation;

- Hydrologic and Hydraulic studies/analyses, engineering studies, and drainage studies for the purpose of project design and feasibility determination included as part of a project subapplication;
- Protective measures for utilities (*e.g.*, electric), water and sanitary sewer systems and other infrastructure (*e.g.*, roads and bridges);
- Storm water management projects (*e.g.*, culverts and retention basins) to reduce or eliminate long-term risk from flood hazards; and
- Localized flood control projects, such as certain ring levees and floodwall systems that are designed specifically to protect critical facilities (defined as Hazardous Materials Facilities, Emergency Operation Centers, Power Facilities, Water Facilities, Sewer and Wastewater Treatment Facilities, Communications Facilities, Emergency Medical Care Facilities, Fire Protection, and Emergency Facilities) and that do not constitute a section of a larger flood control system.

If your community has identified flood mitigation projects in your local mitigation plan, consider PDM! Application information can be found on the Ohio EMA – Mitigation Branch website at www.ema.ohio.gov/mitigation.asp. **Hurry, applications are due to Ohio EMA by 5:00 PM January 14, 2008.** 

Changing of the Floodplain Administrators

By Tanisha Barnett—Administrative Assistant
ODNR, Division of Water—Floodplain Management Program

Hey Everybody! Has your local Floodplain Administrator (FPA) or Chief Elected Official (CEO) changed recently? If so, it is important for the Floodplain Management Program to know about it.

I understand that things get crazy and can be busy from time to time; however, it is extremely important to send our office the current information. I know, with the recent election, many of your CEO's will be changing. If this applies to your community, please inform our office of the current CEO and FPA information as soon as possible .

Throughout the year, we send many mailings to the communities for various reasons. We have heard that some FPAs are not receiving this information because we do not have the correct contact information. Unfortunately, the information was sent to the wrong person, the person has passed away, or no longer works there. So, please help us help you!

It is important to our office that we maintain current and accurate information. This helps us to better serve your community, the public, FEMA, and other state agencies.

To make the information exchange as easy as possible, I am checking on the possibility of developing an online tool for your use. I am interested in knowing if your community would find it easier and more convenient to provide our office the

FPA and CEO information online. Please give me a call or send an email with your thoughts.

The Floodplain Management Program strives to provide high quality assistance and products. Since community contacts are one of our most frequently requested pieces of information, we need your help.

FPA contact information is listed on our website at: www.dnr.state.oh.us/Water/FloodPlains/refrencs/tabid/3520/Default.aspx. Please check your community information and contact me with any changes or corrections at Tanisha.Barnett@dnr.state.oh.us or (614) 265-6750. The following contact information is needed:

- Name
- Address
- Phone and fax number; including the extension if there is one.
- Contact's Title (such as Mayor, Zoning Inspector, etc.)
- Email for the contact and the date on which the change was made.



Making Your Community Safer After the Flood: What Have You Done Since the Last Flood?

By Cynthia Crecelius, CFM—Program Manager
ODNR, Division of Water—Floodplain Management Program

Every time the newsletter preparation begins, our staff tries to identify information that will be relevant and timely for all of you. We then set out researching and writing to help solve the problems. The following article was originally written in 2004, but the message remains – we need to respond and recover differently if we expect to reduce damage!

Flooding is the natural hazard that most often impacts Ohio communities, and results in millions of dollars in damage every year. Ohio continues to receive federal disaster declarations due to flood damage. The communities impacted by these flood disasters stretch from the Ohio River to Lake Erie. The good news is that flooding is one natural hazard that has been studied, mapped, and a risk management strat-

egy exists - the National Flood Insurance Program (NFIP). Although the NFIP has federal oversight from the FEMA and technical assistance from the Ohio Department of Natural Resources, Division of Water - it is only effective if your community

imposes local floodplain management regulations and land use controls daily to help save lives and property.

The NFIP provides an approach that helps local and state floodplain management programs to focus on reducing future flood risk and protecting the natural benefit and function of the floodplain by using land use and development standards. We know that enforcing floodplain management regulations is especially critical following a disaster event. This is in order to stop the cycle of repetitive flood losses and to comply with the NFIP criteria, which ensures flood insurance and flood disaster assistance eligibility.

As a floodplain manager or elected local official you

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have no doubt witnessed some of the chaos and emotion following a flood in your community. There is “pressure” to rebuild immediately and to not inconvenience your citizens any more than “Mother Nature” already has. There can be lack of coordination between the federal, state, and local agencies that respond to floods. Especially, locally, there will be competition and confusion over how to reallocate the resources and budget of your community. Misinformation about FEMA, flood insurance, flood hazard area development standards, and disaster assistance will be everywhere!

For several weeks, the staff of the Floodplain Management Program have been out in the flooded communities and have answered hundreds of phone calls to our office. The recurring questions and issue for which our assistance is sought can be summarized as “how do you (the elected official or floodplain manager) deal with the consequences of past decisions and possible predecessors who avoided actions to correct flooding problems?” In many cases the specifics are that flood hazard area permits have never been required, structures are in violation of the flood damage reduction regulations, substantial damage determinations have never been made in your community following other floods, and there is no permit or development review process to follow. There may not be “quick fixes” for these problems, but there are consistent and effective approaches that will make your community safer in future floods.

Our advice for an elected official is to take this opportunity to become knowledgeable about the flood risk and problems in your community. Focus on the well being of the whole community as you repair and recover. For the local floodplain manager it is important to understand what the community floodplain regulations require and be prepared to implement them.

Making the Community Safer After This Flood...Substantial Damage Determinations and the Permit Process

Before the repair or alteration following a flood or other disaster, the local floodplain administrator is required to determine whether damaged structures must be flood protected to comply with the local floodplain regulations for “substantially damaged” structures. Under the NFIP, “substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Preliminary damage assessments compiled soon after disasters by county emergency management staff can be a good starting point for identifying the potentially substantially damaged structures. These assessments are used to determine county need for state and federal disaster assistance, and can be a screening tool to separate structures with minor damage from those with significant structural damage. The next step is to require applications for floodplain development permits that will verify whether a structure is substantially damaged. The floodplain administrator must confirm if a potentially substantially damaged structure exists by reviewing the property owner’s estimate of repair cost and market value of the building prior to the damage event. The floodplain administrator is responsible for notifying the property owner of the flood protection elevation and construction standards contained in the local floodplain regulations. Structures sustaining “substantial damage” must be flood protected to at least the 100-year base flood elevation (also known as the 1% annual chance flood).

To assist with the overwhelming nature of completing hundreds of post-disaster substantial damage determinations, a cadre of Ohio Building Officials Association members have completed training and have responded to requests from communities in need. [See article on page 19.] Currently, the reimbursement of this cost to local communities is not eligible under FEMA Public Assistance; however, discussion about the possibility of changing the current policy has occurred. A 2007 FEMA Disaster Assistance Policy (DPA9523.2 Eligibility of Building Inspections) clarifies FEMA’s distinction of inspections for health and safety (eligible under Public Assistance Program) and substantial damage determinations (not currently eligible). This policy suggests that technical assistance may be available to building and land-use departments on how to perform substantial damage determinations and to support data collection on damaged buildings. Further discussion of the policy and the need should be pursued.

The Standards

The lowest floor of a new or substantially damaged/improved residential structure located in the 1% annual chance floodplain must have its lowest floor elevated to or above the base flood elevation (100-year or 1% annual chance flood). A new or substantially damaged/improved nonresidential structure located in the 1%

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annual chance floodplain must have its lowest floor elevated to or above the base flood elevation, or must be flood proofed watertight to that level.

These standards are found in nearly all Ohio communities' floodplain regulations. While there are other standards for development in local floodplain regulations, the above standards are the most frequently applicable following a disaster.

Mitigation in Post-Flood Situations

Recent federal and state policies have promoted the concept of hazard "mitigation" – reducing the impact of a disaster, to end the repetitive loss cycle. Mitigating losses during the repair of substantially damaged structures is required under community regulations for NFIP participating communities.

The Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance Program (FMA) and Pre-Disaster Mitigation Assistance Program (PDM) are all opportunities for your community to obtain funding that supports local projects and planning to reduce flood damage. The basic strategies utilized by these programs include: acquisition and relocation; open space land use; elevation or retrofitting of flood-prone structures; training for professionals and local officials in mitigation techniques; development of hazard mitigation plans; and minor structural flood control facilities. For more information on the mitigation programs contact: Ohio Emergency Management Agency, Mitigation Branch at (614) 799-3530 or www.state.oh.us/odps/division/ema.

Doing Something Before the Next Flood...Respond to the Community's Flood Problems

Provide leadership. Understand where the flooding occurred and why. Help identify how the community can avoid flood damage and still benefit from the floodplain value (recreation, water quality, flood storage). Develop goals that will keep the public safe and healthy. Identify specific technical and financial assistance that the local resources can't provide. Know what your community is doing or has done to lessen the impact of future floods. Build relationships with other officials involved in the post-disaster recovery (County Emergency Management Agency, Building Officials, Health Department and City/County Engineer). Review the flood hazard maps and flood studies to make good risk assessment decisions. Have the supplies you need to support public information requests about permit process, substantial damage determinations, and allowable repair, recovery, and redevelopment activities.

You Have a Role in Managing the Community's Floodplain

Elected officials and their designees (floodplain managers) have a responsibility to ensure the public health and safety. The flood hazard is a threat to your community's well being and sustainability. You have an opportunity after this flood, and before the next one, to help develop a successful local floodplain management program. Every community has limited resources, but you can commit to using what you have to achieve reduced flood risk and protection of the floodplain's natural benefits. Involve the public in solving the problems and balance their individual needs and desires with the overall growth, development, and well being of the community.

If you need assistance with meeting the responsibilities of NFIP participation either after this flood or before the next flood happens, please contact our office at (614) 265-6750 or through our website at: www.dnr.state.oh.us/water/floodpln/default.htm.

Upcoming Certified Floodplain Manager (CFM) Exams

OFMA will be proctoring the CFM exams on the following dates in varying regions throughout Ohio:

<u>Date</u>	<u>Location</u>
January 9, 2008	Ohio Department of Natural Resources—Columbus, Ohio
March 12, 2008	Geauga County Building Department—Chardon, Ohio
May 2008	TBD
July 2008	TBD
August, 26 2008	Ohio Department of Natural Resources—Columbus, Ohio

Please contact the Association of State Floodplain Managers (ASFPM) at www.floods.org or (608) 274-0123 for more information on the CFM certification and exam.

Are Your Flood Safety Regulations Too Old?

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

Many communities have flood damage reduction regulations that are significantly out of date. To maintain participation in the National Flood Insurance Program (NFIP), your community must periodically update the Flood Damage Reduction regulations to reflect changes made to the Code of Federal Regulations as well as additional FEMA guidance documents. ODNR has determined that regulations adopted before 1998 should be updated to maintain compliance with federal requirements. Remember, these regulations provide the legal basis from which your community meets their floodplain management responsibilities. In the event that you are challenged or your community wants to pursue enforcement actions, we want your regulations to provide the legal foundation that you need to be successful!

Towards that end, ODNR has updated and improved our model regulations. We have incorporated required definition and standard changes, clarifications from FEMA guidance, and lessons learned from case law over the years. Clarifications to floodplain administrator duties, required technical analyses, information to be obtained (*i.e.*, required use of FEMA Elevation and Floodproofing Certificates), watercourse alteration requirements, and appropriate use of best available data were added to the model in 2002. These clarifications are intended to provide the backing that floodplain administrators need to do their job - by putting these items in black and white it supports what you always knew you needed but the applicants didn't want to provide you! In addition, the new model provides an updated exemption value for inflation and better organization of the standards. The model can be found online at: www.dnr.state.oh.us/water/floodpln/modelfdrules/tabid/3518/Default.aspx This model is a basic regulation that can be used by any size community so it may not fit your needs perfectly. Please feel free to modify the document to fit your administrative process and other special needs.

The following descriptions are intended to assist in your use of the basic model; but, please don't forget to provide our office with an opportunity to review and comment on your draft prior to adoption. In using our current model, there are eight required decisions:

1. Do you want to reference sources of data other than the FEMA provided FIS and FIRM? The "Basis for Establishing Areas of Special Flood Hazard" must reference the current effective Flood Insurance Rate Maps (FIRM) and Flood Insurance Studies (FIS) provided by FEMA. Also, this section provides the opportunity to reference other studies and/or maps, which may be relied upon for establishment of the flood protection elevation, delineation of the 100-year floodplain, floodways or delineation of other areas of special flood hazard. These flood related studies conducted by other state or federal agencies should be entered in Section 1.6(B) with title, author, and date.

2. Where are you going to store floodplain development permit records and the FIS and FIRM? Public access to floodplain records and data must be provided; therefore, these regulations must identify the location of both Flood Insurance Study/Maps and Floodplain Variance/Appeals Board records. These addresses should be entered in Section 1.6(C) and 5.1(B) respectively. Both addresses should include street address, city, and state.

3. Who is going to be the primary individual responsible for implementation of these regulations? Designate the local Floodplain Administrator as a specific position within the community (*i.e.*, Zoning Inspector, Building Official, Mayor, *etc.*). The person who fills this role will be the primary local contact for floodplain issues and will be responsible for ensuring that all local NFIP duties are fulfilled. This position is established in Section 3.1.

4. Do you want to adopt a fee for floodplain development permits? This fee is optional. Your community may charge a fee for the Floodplain Development Permit application and/or Variance/Appeal application. These fees should be entered in Section 3.4(F) and 5.4(A)(3) respectively. The language to be entered may reference a separate schedule of fees or directly state a dollar amount in these sections.

5. Who do you want to serve on your Appeals Board? The Variance/Appeals Board membership should be stated generally by noting titles instead of proper names. The board should be made up of an odd number of citizens or officials that will evaluate relief from flood safety standards on a case-by-case basis. The membership may include elected officials but must not include the local Floodplain Administrator.

Many communities want to use an established board to serve as their Appeals Board for these regulations. If your existing code already establishes the administrative requirements for such a board (*i.e.*, Board of Zoning and Building Appeals), there is no need to re-establish them here. The following changes are necessary to accommodate this alteration of the model:

(1) Exclusively use the following sentence (bolded) to Section 5.1(A), Appeals Board Established: **The [COMMUNITY NAME]**

(1) Exclusively use the following sentence (bolded) to Section 5.1(A), Appeals Board Established: **The [COMMUNITY NAME]**

(Continued from page 9)

[BOARD NAME] is hereby appointed to serve as the Appeals Board for these regulations as established by [COMMUNITY NAME] code Section [#].

(2) Remove the existing text in Section 5.1(B) leaving only the following sentence: *Records of the Appeals Board shall be kept and filed in [LOCATION OF RECORDS].*

(3) Remove the existing text in Section 5.4(B).

(4) Change the subsection numbering as follows:

- Existing Section 5.4(C), please change this to Section 5.4(B)
- Existing Section 5.4(D), please change this to Section 5.4(C)

(5) Correct the intratext reference that has been made incorrect:

In the new Section 5.4(C)(2), please alter the intratext reference so that it reads as follows *"Generally, variances may be... providing items in Section 5.4(B)(1) to (11) have..."*

6. How long will the Appeals Board members serve?

Excluding the situation described in #5 above, the members of the Appeal Board should be appointed for a specified number of years. At the end of each term the members may be reappointed. Staggering of terms is useful to maintain continuity of experience and knowledge base on the board. The term limit should be entered in Section 5.1(A).

7. How many days will applicants have to file an appeal? Where it is alleged there is an error in any order, requirement, decision or determination made by the Floodplain Administrator in the administration or enforcement of these regulations an appeal may be requested. In Ohio, 10-20 days is most commonly used. The number of days should be entered in Section 5.3.

8. What degree misdemeanor will be the penalty for violating these regulations? These regulations must set appropriate penalties for noncompliance. Violation of the provisions of these regulations or failure to comply with any of its requirements shall constitute a misdemeanor of your community's choice. Each day may be considered a separate offense. Consult with your legal counsel on which degree misdemeanor to choose. The degree should be entered in Section 6.3.

Your community has a distinctive set of risks, development pressures, community goals, and individual needs. Matching the right higher standards to those traits will benefit your community. For a detailed dis-

cussion of this subject, please see the *Ohio Floodplain Regulation Criteria*, Chapter 3.

There is, however, one higher standard that is just too commonly used to omit from our discussion here. That standard is "Freeboard" which requires your community to ask two questions:

1. Will your community adopt a freeboard?

"Freeboard" is a factor of safety usually expressed in feet above a flood level for the purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights such as wave action, obstructed bridge openings, debris and ice jams, and the hydrologic effect of urbanization in a watershed. In addition, there are direct savings on flood insurance premiums for structures built with their lowest floor above the base flood elevation.

2. Which type of Freeboard will your community adopt: regular Freeboard and/or A Zone Freeboard? Regular freeboard applies only to building sites that have a base flood elevation available. A Zone Freeboard applies to building sites that fall within "Approximate A Zones" which do not have a base flood elevation available.

(A) Regular Freeboard: To adopt this standard, make the following change to the model: In Section 2.0, enter a number of feet in the definition for "Flood Protection Elevation" as follows "The Flood Protection Elevation, or FPE, is the base flood elevation plus [X] feet of freeboard..."

(B) A Zone Freeboard: In this situation, make the following two changes to the model: Add the following sentence to the existing language in Sections 4.4(D) &/or Section 4.5(C): ***Where flood protection elevation data are not available the structure shall have the lowest floor, including basement, elevated at least two feet above the highest adjacent natural grade.***

Don't forget to submit a draft of your regulations to ODNR for review prior to adoption. Our office asks for 30 days to provide the review letter, but it often takes only a week or two. Once ODNR has approved draft regulations, your community can begin the adoption process. Please note that your community will not be in compliance with NFIP standards until ODNR has approved your adopted regulations. Please see the "Ohio Floodplain Regulation Criteria" guidebook on our website www.dnr.state.oh.us/Portals/7/floodpln/OFRC_8_2006.pdf for a more in depth discussion of these topics.



Major Changes to Flood Damage Reduction Regulations Proposed: Public Involvement Wanted

By Steve Hambley
Medina County Commissioner

In 2004 Medina County Commissioners created a County Flood Damage Prevention Committee to alleviate damage from recent flooding, as well as confront an increasing number of flooding risks in the county. Many of us in local government became alarmed by the growing frequency of encroachment into flood prone and marginal lands from proposed residential subdivisions.

Coordinated by the Medina County Emergency Management Agency, this committee was directed to update our flood plain regulations and make recommendations regarding the following:

- Establishment of a Flood Plain Management and Damage Prevention Program.
- Participation in the Community Rating System under the National Flood Insurance Program in which annual flood insurance premiums could eventually be lowered as much as 20%.
- Becoming a cooperating technical partner with FEMA for updating county flood plain maps.
- Other suggested changes in public policies that would further the public purpose of the program.

Membership in the committee included representatives from the Medina County Commissioners, Medina County Emergency Management, Medina County Highway Engineer, Medina County Homebuilders Association, Village Mayor's Association, Brunswick City, Medina City, Wadsworth City, USDA Natural Resources Conservation Services, Medina County Soil and Water Conservation District, Medina County Dept. of Planning Services, the Township association and a Township Trustee.

To make this all work out with the proper respect for property rights and the protection of public interests has required thoughtful and inclusive dialogue between the various interested parties over the last several years. The committee met nearly every month to tackle each of the assigned tasks and they have made significant progress. The most recent is a major revision to the Medina County Special Purpose Flood Damage Reduction Regulations that is now open for public review and comment before being considered for adoption by the Board of County Commissioners.

This feat was not accomplished over night. Developing consensus among the committee on the major changes in the flood plain regulations, getting the advice and preliminary approvals of ODNR and FEMA, as well as completing the legal fine tuning by the Medina County Prosecutor has taken much longer than most of us would have preferred. But fortunately, that painfully slow process of consensus building is over and the committee has endorsed major changes in the current regulations for adoption by the county.

The first major revision to the county's 1992 flood damage regulations occurred in December 1, 2003. This is the second major revision to county regulations of development in FEMA floodplains and the first to advance a concept of "Higher Standards". These proposed regulations will increase our ability to reduce potential flood damages and preserve existing FEMA floodplain areas. The Higher Standards involve changes in four main sections: Materials Storage, Critical Development, Access and Compensatory Storage. The purpose for each amendment section is as follows:

- **Materials Storage Regulations:** The purpose is to protect the community against flood damage from materials that may block flow or which may become buoyant, flammable, explosive, or cause other environmental health issues in floods.
- **Critical Development Protection Regulations:** The purpose is to protect critical development, such as hospitals, fire stations, nursing homes, gas/oil/propane storage facilities, against damage and minimize potential loss of life from flooding.
- **Access Regulations:** The purpose is to provide vehicular or pedestrian access through the floodplain during flood conditions.

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- **Compensatory Storage Regulations:** The purpose is to compensate for the loss of flood storage capacity caused by filling in the floodplain through requiring the removal of an equal amount of material from the floodplain near the proposed development.

Public hearings on these amendments were held on Monday, July 30, 2007 and August 6, 2007 at the County Administration Building, Medina County Commissioners Hearing Room, 144 North Broadway Street in Medina. The proposed amendments are available for review at the offices of the Medina County Commissioners and Medina County Highway Engineer, as well as online at www.highwayengineer.co.medina.oh.us.

Public participation is paramount to balancing the public interests of flood damage reduction with those of private property owners. The proposed changes to county regulations have attempted to maintain the legal rights of property owners as much as possible, while also providing reasonable and legally defensible restrictions to protect public safety. They are not perfect. They apply only to those 100 year floodplain areas delineated by FEMA maps, but the committee hopes that other local non-FEMA designated floodplains can eventually also fall under Higher Standards Regulations. Though limited, it is a significant start on a journey to improve the safety and living standards of our county residents.

Thomas Jefferson once wrote, "The whole of government consists in the art of being honest." So to properly address this issue, we have to be honest about it. The problem is real and it won't go away. It will require an unrelenting pursuit of a vision of a county where our homes are not in calamitous conflict with nature and flood hazards are a distant memory. Hydrologists tell us that flooding is a natural process that helps to maintain the health of a stream or river. Flooding is bad when people decide to place buildings in the way of the natural overflow of the watercourse. To be honest about it, our message to those wanting to build subdivisions and homes that create new flood hazards should be, "No thanks. We don't need any more." Your involvement in this process can help reaffirm that message.

Ohio Floodplain Management Association Update

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



2007 Ohio Statewide Floodplain Management Conference

On August 22-23, 2007, the Federal Emergency Management Agency (FEMA), Ohio Department of Natural Resources (ODNR), and Ohio Floodplain Management Association (OFMA) sponsored the eighth annual Ohio Statewide Floodplain Management Conference at the Embassy Suites in Dublin, Ohio. The conference theme, "Managing Ohio's Floodplains During Global Climate Change", directed the agenda and included discussion on the far-reaching effects of environmental change on Ohio's flood risk. The conference featured Dr. Lonnie Thompson, renowned Glaciologist for the Byrd Polar Research Center as the Keynote Speaker. His presentation "Abrupt Climate Change, Past, Present, and Future" reviewed his research regarding global climate change and its societal and environmental impacts.

The conference convened over 200 public and private sector professionals to learn about the most current issues in floodplain management. The agenda offered sessions on sustainable development, floodplain management regulations, flood map modernization, mitigation, and No Adverse Impact (NAI). The conference format included three concurrent tracks plus the Flood Loss Reduction Workshop (a total of 37 sessions and 47 speakers). OFMA also proctored the Certified Floodplain Manager (CFM) exam for eight individuals.

Conference attendees can receive Continuing Education Credits (CEC) for attendance at the conference. The Association of State Floodplain Managers (ASFPM) has allocated 12 CECs toward Certified Floodplain Manager (CFM) accreditation for two days attendance at the conference. The Board of Building Standards (BBS) has awarded two CECs for all disciplines. (Approval # BBS-2007-068).

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OFMA extends our sincerest thanks to the following:

- **FEMA** for providing support and funding to enable the coordination of the statewide conference.
- the **2007 Conference Planning Committee** [Kari Mackenbach, Jim Mickey, Mike Mihalisin, and Mary Sampsel] 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 **Sponsors** [Burgess & Niple, EMH&T, FMSM Engineers, MS Consultants, SmartVent, URS Corporation, and Williams Creek Consulting] for their participation as well as their financial support of the conference.
- the **Exhibitors** [United States Geological Survey, Water Management Association of Ohio, ODNR Floodplain Management Program, Federal Emergency Management Agency, and the Association of State Floodplain Managers] for sharing their expertise and resources with conference participants.
- the **Attendees** for their time and effort to learn how to improve flood damage prevention throughout their communities.

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 or programs for their professionalism, enthusiasm, and support of floodplain management. The Committee reviews the nominations and selects recipients based on the award criteria. Congratulations to the 2007 OFMA Recognition Award Recipients:

- **Floodplain Administrator of the Year** was awarded to Marty Bresher (Preble County).
- **Award for Innovation in Floodplain Management** was awarded to The Village of Elmwood Place.
- **Jerry J. Oney Distinguished Member Service Award** was awarded to Kari Mackenbach (URS Corporation) and Joseph Black (Lawrence County SWCD).
- **Peter G. Finke Award For Most Valuable Contribution to Floodplain Management** was awarded to K. Scott Jackson (United States Geological Survey).
- **Certificates of Appreciation** were presented to Terry Fell (FEMA Region V), Dr. Lonnie Thompson (Byrd Polar Research Center – Ohio State University), and the Ohio Department of Transportation (ODOT).

If you would like to nominate a peer or colleague for any of the OFMA Recognition Awards don't wait! Nominations are currently being accepted for the 2008 honors. The deadline for submission is July 1, 2008. For criteria, application forms, or more information, please call (614) 265-6754 or Cindy.Crecelius@dnr.state.oh.us

2007-2008 OFMA Board

Congratulations to the newest members of the OFMA Board: Shawn Arden, PE, CFM (MS Consultants), Jim Mickey, CFM (Licking County Planning Commission), and Randy Pore, CFM (Knox County Planning Commission). Each of these individuals will be serving Member-At-Large positions from 2007-2009.

Following is the 2007-2008 OFMA Executive Board:

<i>Chair:</i>	Alicia Silverio, CFM	<i>Member-At-Large:</i>	Miles Hebert, PE, CFM
<i>Vice-Chair:</i>	Mike Mihalisin, CBO, CFM	<i>Member-At-Large:</i>	Jim Mickey, CFM
<i>Secretary:</i>	Jerry Brems, CFM	<i>Member-At-Large:</i>	Randy Pore, CFM
<i>Treasurer:</i>	Tadd Henson, PE, CFM	<i>Member-At-Large:</i>	Ray Sebastian, CBO
<i>Member-At-Large:</i>	Shawn Arden, PE, CFM	<i>ODNR Representative:</i>	Cindy Crecelius, CFM
<i>Member-At-Large:</i>	Chad Berginnis, CFM	<i>Past Chair:</i>	Mary Sampsel, PE

2007 Ohio Statewide Floodplain Management Conference Presentations and Photos on the Web...

OFMA has posted presentations and photos from the 2007 Ohio Statewide Floodplain Management Conference on the organization's website at www.ofma.org.



Why Would You Want a Certified Floodplain Manager in Your Community?

By Cynthia J. Crecelius, CFM—Program Manager
ODNR, Division of Water—Floodplain Management Program

Once again, many Ohio communities found themselves “knee deep” in flooding this summer. The floods seem to be happening on a much more frequent, if not almost regular basis. The good news is that many communities have new options and better recovery strategies because they have Certified Floodplain Managers serving their residents and businesses.

The Certified Floodplain Manager program is a national certification authorized by the Association of State Floodplain Managers (ASFPM). It was created to recognize the need for continuing education and professional development in support of local, state, federal and private-sector floodplain managers. As the number of flood disasters continues to rise, and communities are looking for ways to remain sustainable in the face of repeat damage and repair – there is a growing demand for qualified professionals to help solve the problems.

Certified Floodplain Managers demonstrate knowledge of basic national standards for flood protection and the complex concepts of floodplain management by successfully passing an exam. In Ohio, the interested person must pass the ASFPM national exam (there are a few ASFPM accredited states that administer their own exams). The exam covers broad floodplain management concepts, flood hazard mapping, National Flood Insurance Program regulations and administrative procedures, flood insurance, flood hazard mitigation techniques and the natural and beneficial functions of floodplains.

ASFPM has designed the goals of the Certified Floodplain Manager program to benefit communities. The CFM program builds knowledge and capability in local floodplain managers. It promotes the visibility and credibility of the professional CFM nationally and in your community resulting in more influence. The program requires renewal of the CFM every two years, and has established continuing education requirements. By employing a CFM who understands how development actions impact neighboring properties and communities, your community may reduce legal liability. The CFM commits to a professional code of conduct that is focused on the health and safety of your residents and community. Having a CFM as your resident floodplain management expert is a reasonable way to address the challenge of balancing development demands with effective and efficient use of your floodplain resources.

A CFM knows what federal, state, and local laws impact development in the floodplain. They know how to apply the FEMA map and Flood Insurance Study information to explain the flood risk and vulnerability for specific development sites, buildings and the community in general. A CFM has been exposed to options and strategies that will help individuals better manage or avoid future flood risk altogether. They can be an integral part of your community development team by recommending reasonable land use decisions that will protect citizens and property throughout your community. A Certified Floodplain Manager can improve your position when the next flood hits!

Did you know that Ohio has 46 Certified Floodplain Managers including all the technical staff in the Floodplain Management Program? The ODNR Floodplain Management Program provides an opportunity, at least once each year in coordination with the statewide floodplain management conference, for those wishing to take the ASFPM exam. In 2007 the following individuals achieved the **Certified Floodplain Manager** designation: **Matthew Gramza, CFM** – CEC Consultants; **David Hafner, P.E. CFM** – Kleigners & Associates; **Randall Pore, CFM** – Knox County, Ohio; **Clyde Hadden, CFM** – CT Consultants; **Matthew Leshner, CFM** – ODNR Floodplain Management Program; **Thomas Odenigbo, CFM** – City of Trotwood; **Todd Richard, CFM** – City of Findlay; **Wayne Rinehart, CFM** – City of Marietta; **Harold Scobie, CFM** – City of Broadview Heights; **Dennis Seifert P.E., P.S., CFM** – City of Broadview Heights; **Amit Ghosh, CFM** – City of Cincinnati.

CFMs making a difference in recent recovery efforts! To see Certified Floodplain Managers in action you only needed to observe the recovery efforts in the City of Findlay and the Village of Ottawa. Floodplain management became a priority following significant flooding that occurred August 21-27, 2007 in north central Ohio. Todd Richard, CFM is the floodplain manager for the City of Findlay and Denise Balbaugh, CFM is floodplain manager in the Village of Ottawa. Well-trained and aware of how important complying with the NFIP regulations is during recovery, both Todd and Denise took swift action. In Todd’s case he had several thousand structures in Findlay’s flood hazard areas. Denise had several hundred in the Village of Ottawa’s floodplain area. Each knew that they had a short window of opportunity.

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nity to complete their substantial damage determinations and issue permits for the repair and recovery efforts that property owners were anxious to begin. They were able to identify the structures located in the flood hazard areas using FEMA maps and Flood Insurance Study information. When it became apparent that they were going to be overwhelmed with inspections for substantial damage and permit duties, they quickly thought to ask for assistance from the Ohio Building Officials Association Disaster Response teams [see article on page 6]. This brought more CFMs (Several of the Ohio Building Officials Association members have become CFMs.) to work with the local CFMs. With everyone on the same page, and

having the basic understanding of the NFIP regulatory and administrative procedures, nearly 2400 substantial damage field determinations were completed in five communities within 5 days. Because of the study and preparation that Todd and Denise had done prior to the flood disaster, they were able to use more of the disaster resources (people and programs). Timely substantial damage determinations were completed and property owners have information on insurance, disaster assistance, flood protection regulations, and mitigation programs that may help with long-term reduction of their flood hazards.

For more information on how to become a Certified Floodplain Manager, visit the Association of State Floodplain Managers Association at www.floods.org.



FEMA helps flood victims who are willing to help themselves

By Corinne Colbert

Reprinted, with permission, from *The Athens News* Reader's Forum
Thursday, August 16th, 2007

Having endured three catastrophic floods in the eight years I lived in Amesville (including one, in 1998, that put my home under 5 feet of water), and having run the federal flood mitigation project for the village of Amesville, I have to response to Tom Baggs' letter of Aug. 9.

Why is FEMA "sticking its nose" into Chauncey's business? For the reason Mr. Baggs himself notes: repeated flooding.

FEMA defines a "repetitive loss property" as "any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling 10-year period, since 1978." As of 2005, the NFIP insured almost 4.5 million properties, of which about 1 percent were repetitive loss structures. But those structures, FEMA notes, account for 30 percent of paid claims. (This and other interesting facts about RLPs are in "Federal Flood Insurance: The Repetitive Loss Problem," a report prepared for Congress in 2005. It's online at www.fas.org/sqp/crs/misc/RL32972.pdf.)

And that's just for the properties that are insured. When my home was inundated in 1998, we didn't have flood insurance because according to the U.S. Geological Survey, our property wasn't in the flood plain. Well, Federal Creek can't read maps. Luckily for us, our damages were light: We qualified for a \$10,000 grant from FEMA to pay for renovations -- and the first

thing we did after moving back in was to buy flood insurance. Those with greater losses who are uninsured and those who are underinsured have to take out low-interest government loans to make their homes livable again. (For more on why it's better to have flood insurance than not, read FEMA's brochure, "The Benefits of Flood Insurance Versus Disaster Assistance." It's available at www.fema.gov/library/viewRecord.do?id=1621.)

Why does FEMA get to "push [its] weight around and try to intimidate and harass village officials and residents"? Because FEMA (read: the American taxpayer) pays the bills when Chauncey floods. And floods. And floods again. "Flood damage is reduced by nearly \$1 billion a year through communities implementing sound flood-plain management requirements and property owners purchasing of flood insurance," FEMA reports on the NFIP website. "Additionally, buildings constructed in compliance with NFIP building standards suffer approximately 80 percent less damage annually than those not built in compliance."

That kind of protection comes with strings. "Sound flood-plain management requirements" include zoning and building codes and flood-plain ordinances that restrict the types and locations of structures in a flood plain. Failure to enact and enforce such restrictions means that structures are at greater risk of flood dam-

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age and, by extension, more flood-insurance payouts and federal disaster funding. Like any insurer, FEMA wants to minimize its risk. And since flood-insurance premiums are subsidized by the government -- and disaster assistance is entirely taxpayer funded -- I'm all for minimizing risk.

Mr. Baggs may choose to forgo flood insurance. But if the village of Chauncey doesn't comply with FEMA's flood-insurance rules, his neighbors who do want flood insurance will face higher premiums. I admire his rugged individualism, but he shouldn't make his neighbors pay for it.

"Most village residents [are] not able to afford" flood mitigation? FEMA's Increased Cost of Compliance (ICC) program gives NFIP policyholders up to \$20,000 [Editor's note: maximum ICC funds per claim have been increased to \$30,000] to elevate their homes; floodproof them (such as installing foundation flow-through holes or raising furnaces, etc., above flood level); relocate their homes; or demolish the structure in question. I've seen this work; several of my former neighbors in Amesville elevated their homes -- and none of them, in Mr. Baggs' words, is "perched up in the air and on display like a monkey or a parrot in a cage." Anyway, I'd rather be laughed at

for a funny-looking house than ever have to scrub flood mud out of my home again.

"If FEMA were serious about wanting to help this village, why don't they buy out these distressed properties?" For FEMA to be serious about helping Chauncey with its flooding problems, Chauncey has to show that it is serious, too. You want FEMA to buy out problem structures, Mr. Baggs? They'll do it -- if the village can form a committee to study the problem, prepare a proposal that outlines exactly which structures will be purchased, and secure matching funds. It takes leadership and vision and consensus. Amesville did it. Can Chauncey? Or is it just easier to sit around and complain about the nasty feds and how they do nothing but harass homeowners?

Mr. Baggs can't complain that he "didn't ask FEMA for anything" and then complain that FEMA does nothing. If you don't ask, you won't receive. When it comes to flood mitigation, FEMA helps those who are willing and able to help themselves. It's not a handout; it's a hand up. And property owners have to reach out first.

Corinne Colbert no longer buys flood insurance, having moved from Amesville to a secluded ridgetop outside Athens because her husband couldn't handle living "in town."

ASFPM 2008 Annual Conference - Reno-Sparks, Nevada

The Association of State Floodplain Managers will convene the world's largest and most comprehensive floodplain management conference - the 32nd annual gathering - the week of May 18-23, 2008, in Reno-Sparks, Nevada. You are invited to share your experiences with local, state, and federal officials, industry leaders, consultants, and other interested parties by presenting a paper relevant to the theme, "A Living River Approach to Floodplain Management."

Throughout the week, nearly 200 of the industry's experts will conduct plenary and concurrent sessions and share state-of-the-art in techniques, programs, and resources to accomplish flood mitigation, watershed management, and other community goals.

Please see ASFPM's website www.floods.org for more details.



Ohio Map Modernization Update

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

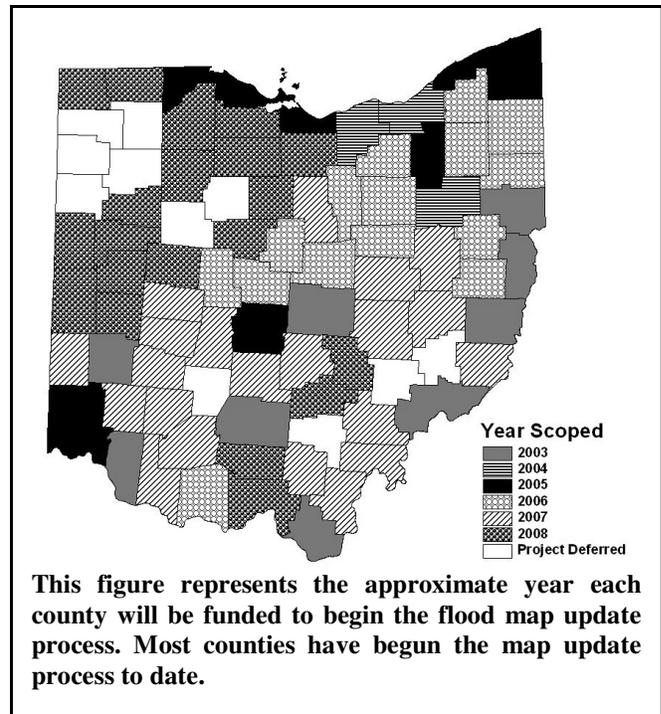
FEMA's Map Modernization Initiative is nationwide, with a projected need of one billion dollars to support the goal of modernizing the nation's inventory of flood maps. The ODNR-Division of Water, Floodplain Management Program is coordinating the state's involvement. Until the initiative is finished,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

Seventy-seven counties have begun the map update process to date. Funding for Scoping and Map Production is not available for 29 of these counties, but many should receive it in the next six months. Figures below better illustrate the map update process, each county's current stage of map update, and the years they should be funded to begin their respective projects.

Counties that are currently in the *Pre-Scoping Activities* stage and should have a *Scoping Meeting* this Spring include: Allen, Auglaize, Crawford, Darke, Fulton, Hancock, Hocking, Huron, Logan, Marion, Mercer, Miami, Perry, Pike, Sandusky, Scioto, Seneca, Shelby, Williams, and Wood.

ODNR recently received proposed sequencing changes from FEMA for several counties in the *Pre-Scoping* and *Scoping* phases of Map Modernization. Funding will be reduced in FY08, and this will reduce the number of counties scheduled to receive new

maps in the coming years. ODNR is working with FEMA to maximize the mapping within the state, but a reduction in mapping projects is inevitable. To date, the following county projects will be deferred until more funding becomes available: Defiance, Fayette, Hardin, Henry, Morgan, Noble, Paulding, Putnam, Van Wert, Vinton, and Wyandot. Please note that this list may change in the coming months as ODNR and FEMA work to reconcile the diminished funding.

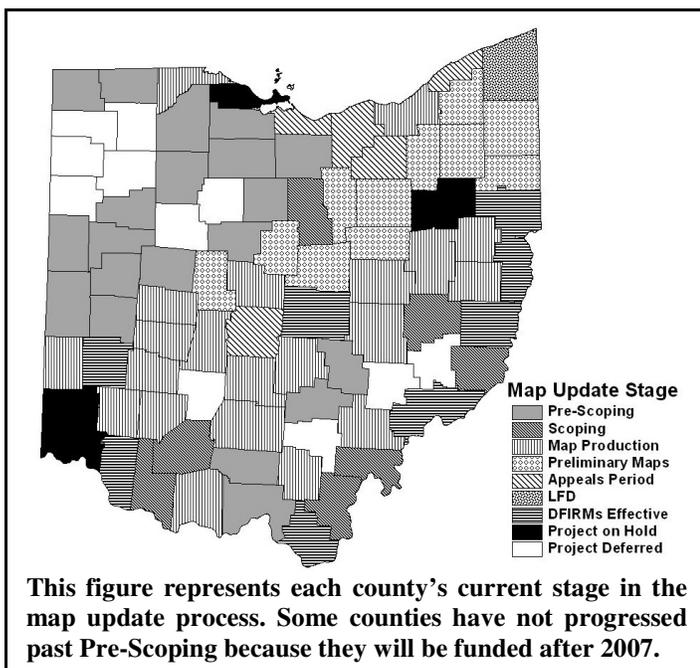


Counties in the *Map Production* phase are: Adams, Athens, Carroll, Champaign, Clark, Clinton, Coshoc-ton, Cuyahoga, Delaware, Fairfield, Greene, Harrison, Jackson, Lucas, Madison, Muskingum, Pickaway, Preble, Ross, Tuscarawas, and Warren. (Please note that Map Modernization projected funding was reduced in 2007, and *Map Production* was delayed for some counties having their *Scoping Meetings* this past June. Most of these counties should be considered priorities for *Map Production* in Fiscal Year 2008.)

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

Preliminary Maps have been issued for Ashland, Erie,

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Franklin, Geauga, Holmes, Knox, Lake, Lorain, Mahoning, Medina, Morrow, Portage, Summit, Trumbull, Wayne, and Union counties.

Appeals/Comment Periods have begun for Erie, Lake, Holmes, and Trumbull counties. *Appeals/Comment Periods* have ended recently for Franklin, Lorain, and Medina counties.

Ashtabula County received their Letter of Final Deter-

mination (LFD), dated June 18, 2007, which means their maps will be effective December 18, 2007.

Nine counties presently have effective DFIRMs in Ohio: Belmont, Clermont, Columbiana, Jefferson, Lawrence, Licking, Montgomery, Ross, 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.



NOTICE:

The new MT-EZ form has been released by FEMA for use in Letter of Map Amendment (LOMA) applications. The expiration date for the new application form is September 30, 2010.

Please see FEMA's website www.fema.gov/library/viewRecord.do?id=2328 for details.

Getting in Deeper: Substantial Damage Determinations

By Christopher M. Thoms, CFM—Program Supervisor
ODNR, Division of Water—Floodplain Management Program

As Ohio's floodplain managers gathered in the City of Dublin this August for the Statewide Floodplain Management Conference-2007, the storm clouds gathering in the North of the state provided an appropriate though unwelcome reminder of the ongoing need for effective floodplain management. Widespread flooding soon followed the record rainfalls and flood waters were once again rising in Ohio communities. Floodplain managers for the affected communities were soon assessing the situation and what they found involved thousands of flood damaged structures, requiring substantial damage determinations.

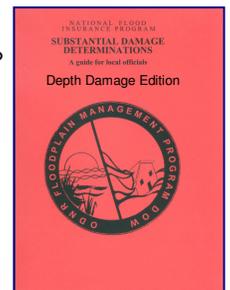
At the time of this flood-recovery process, the Floodplain Management Office offered a new and simpler method for *residential* substantial damage determinations *resulting from flood*.¹

This new method is presented in the **DEPTH DAMAGE FIELD ESTIMATE worksheet** and is available at www.dnr.state.oh.us/tabid/3521/default.aspx. Using this Depth-Damage method, the inspector measures a structure's exterior flood mark to lowest adja-

cent grade and indicates the measurement on the form's depth column.² A table of damage percentages, specific to structure-type, is contained on the form. The

table is based upon the U.S. Army Corps of Engineers' Generic Depth-Damage Relationships (see www.usace.army.mil/cw/cecw-cp/library/egms/egms.html).

That damage-percent may be used by the local official to inform the property owner that their residential structure has been substantially damaged (≥50% of the pre-damaged market value) and must therefore be repaired in such a way as to be in compliance with the community's flood safety standards for new construction. A sample letter for use in notifying the property owner of that substantial damage determination can be found in the newly revised **NFIP Substantial Damage Determinations: A guide for local officials, Depth-Damage Edition**. As with any substantial damage determination process, the property owner



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may provide additional information to the local official to better define the pre-damage event market value, extent of damage, and cost of repair. The local floodplain official's determination should be based upon the best information available. To that end, this new depth-damage method should help.

In this flood recovery, the Depth-Damage method appeared to be well received by both local officials and OBOA inspectors [see related article page 6] as an easier and faster means of collecting and using the required information. Though offered as an improvement, this depth-damage method has limitations. It is applicable only for residential structures and only for flood-related damages. FEMA and the Corps are working on appropriate methods for use with non-residential structures. The Floodplain Management Office continues to revise our **Guide** to incorporate the best information available.

Storm clouds will continue to gather, floodwaters will continue to rise. As floodplain managers, we will continue to refine and improve the substantial damage process so that local floodplain managers can provide better information in a timely fashion to property owners. As a result, property owners are more likely to repair in compliance with local flood safety regulations, be less at risk for flood damages, and less likely to require flood damage evaluation. Then, maybe we could just talk about the weather rather than having to do something about it.

¹ Substantial damage determinations apply to structures in federally identified floodplains, originally built before the initial date of a community's Flood Insurance Rate Map (FIRM) or where subsequent revisions to the FIRM initially identify a structure as in or as being below an increased Base Flood Elevation (BFE). Anytime a floodplain structure is substantially damaged—from any source—that structure must be brought into compliance with local flood safety regulations.

² The two exceptions to the use of lowest adjacent grade to measure depth of flooding are compliant *Enclosures Below Lowest Floor* and *Manufactured Homes* where the lowest floor is used instead of lowest adjacent grade (See the **NFIP Substantial Damage Determinations: A guide for local officials, Depth-Damage Edition** for further discussion).



Effective Floodplain Management Gains Ground in Recent Flood Response

By Cynthia J. Crecelius, CFM—Program Manager
ODNR, Division of Water—Floodplain Management Program

For the past several years, a partnership has been growing between the Ohio Building Officials Association, Ohio Department of Natural Resources Floodplain Management Program, and Ohio Emergency Management Agency Mitigation Branch. This partnership was elevated to another level during the response to August 2007 flooding in north central Ohio.

The basis of this partnership is the need to support communities impacted by natural disasters beyond initial damage assessment and rescue/response efforts. Specifically, when “substantial damage determinations” are needed to comply with National Flood Insurance Program requirements, many communities find their local ability to respond is exceeded and not addressed by current federal disaster assistance. The substantial damage determinations, for structures in the flood hazard areas, are the community's method of reducing future flood risk and making people safer. Enforcement of local floodplain management regulations means that as people recover, they will reduce their risk by complying with flood protection standards. In other words, mitigation occurs through proper use of the National Flood Insurance Program following disasters.

Damage assessment (often confused with substantial damage determination) occurs initially because those supporting the response need to know where, when, what, and how many have been impacted. The initial damage

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assessment is also used to determine what disaster assistance programs and levels of government response (local, state, or federal) will be needed. Damage assessment typically focuses on the immediate response and short-term health and safety needs. Rescue, food, and shelter are priorities and the emergency management community takes the lead. Elected officials are focused on urgent and life-threatening impacts of the disaster event on their community. FEMA's capability and policy are strong in these areas.

When the crisis subsides, the event transitions into a recovery. Depending on the disaster and the size of impact, this can occur in days, weeks or months. This is the time to look at restoring the "normalcy" and picking up the pieces, literally in many cases. As the Floodplain Manager in an NFIP community, you become the lead. The emergency managers may still serve as coordination points and assist, but they are beginning to focus on the next event. It is at this transition point, that the substantial damage determinations become critical. People with property damage want to know what regulations apply to their recovery and in many cases what assistance or options might allow them to relocate and reduce future risk. Elected officials need to understand that enforcement of flood protection and land use standards are smart recovery! A responsibility of every elected official is the health, safety, and sustainability of their community.

The Ohio Building Officials Association's (OBOA) support was designed to help communities accomplish their substantial damage determinations quickly and efficiently. This means that issuing permits for structures in flood hazard areas can keep pace with the delivery of flood insurance claims, financial disaster assistance, and property-owners' desires to restore their properties quickly. Property-owners have the financial resources, as well as, labor and material resources within weeks of the disaster. Substantial damage determinations must be made prior to the issuance of permits, because it may affect the options available as part of the repair and recovery. The building officials' expertise and knowledge of risk-reduction codes is part of the solution for quick substantial damage determinations. Making the permitting and enforcement effort more efficient is effective floodplain management.

Since the 2001 initiation of this partnership, progress has been made in training over 400 code officials in the detail and criteria of "substantial damage determinations," developing standard inspection services and products, statewide mutual aid agreement, and a process for linking the inspection support to the communities in need. The response capability has been pilot tested in several disasters, but not until DR-1720 declared for the August 2007 flooding, did the process come together.

The partners agreed that since the lead for coordination and response to disasters resides with Ohio Emergency Management Agency, requests for substantial damage determination help and mobilizing the OBOA inspectors should go through Ohio EMA. Ohio EMA follows the Federal Disaster Response Plan and assigns those who help with the disaster response and recovery by their function or support capability.

Ohio EMA staff quickly realized that the ability to deploy the OBOA inspectors, respond to community requests for assistance in doing substantial damage determinations, and tracking / reporting on the assistance progress could all be addressed using the existing disaster response process. The county emergency management director handles coordinating requests for assistance. Directors are local, trained, and comfortable with the role of coordinating with the State and Federal agencies involved with disaster management. The State staff, who work from a central operation center, match the resources available (all pre-identified and organized by Emergency Support Function) to the correct responders. The central operations center will track the who's, where, and what's still needed and the progress of each action or "mission."

In the case of the substantial damage determinations, this assistance fits under the Emergency Support Function – 14 *Recovery and Mitigation*. This function provides the framework for longer-term strategies including reducing future risk. Compliance with the National Flood Insurance Program flood protection criteria reduces future flood risk. Substantial damage determinations are a requirement for structures in Special Flood Hazard Areas in communities that participate in the NFIP (over 712 communities in Ohio).

During the recent disaster, 5 Ohio communities requested assistance with their substantial damage determinations. OBOA responded by completing nearly 2400 inspections in 4 ½ days. The following steps should be followed to request substantial damage determination assistance:

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1. Community floodplain manager completes a written request (template letter available) to the county emergency management director. The request requires signature by the Chief Elected Official of the community. County emergency management director forwards the request to State. (Currently, requests are forwarded to ODNR Floodplain Management Program, but this will be reviewed in post-disaster discussions.)
2. Ohio Building Officials Association (OBOA) needs:
 - a. estimate of how many structures in identified floodplain need determinations;
 - b. general location of the area to inspect (subdivision name, street boundaries, community, *etc.*);
 - c. name, address and phone number for contact person in each community requesting assistance; and
 - d. commitment from requesting community that inspectors will have lodging, fuel for vehicles, reimbursement for meals (this information is all included in the template letter that the Chief Elected Official must sign at time of request for assistance).
3. ODNR Floodplain Management Program coordinates with OBOA Coordinator who sends the OBOA volunteer inspectors to the communities requesting assistance. ODNR completes the daily reporting and ESF-14 responsibilities with the State Emergency Operation Center.

The process used in this recent disaster has helped the emergency management and the floodplain managers to better understand each other's role in the response and recovery efforts. There is now a formal method to request and track the substantial damage assistance. Since the OBOA responders are volunteers, this is important to ensure everyone's safety. Awareness of how the NFIP can be used to help reduce future risk is growing! It is exciting to see more effective floodplain management result from the hard work and dedication of all those who have been involved with the partnership.

In the aftermath of this disaster, there will be discussions about what improvement should be included to make the substantial damage assistance an efficient and effective process for everyone involved. There will also be discussion about the appropriateness of a Disaster Assistance Policy that provides reimbursement to communities for substantial damage determinations. Current policy does provide eligibility (under Public Assistance Category B) for building inspections that are safety inspections.

Technical assistance for how to perform substantial damage determinations and collecting data on the damaged structures is eligible. However, the FEMA policy indicates that a community's increased code enforcement activities (NFIP compliance with flood damage reduction regulations) are part of the rebuilding and recovery activities that are not eligible for reimbursement. The practical problem with this thinking is that the permits for repair, and recovery decisions by property owners are needed as quickly as the funds and manpower for recovery happen.

The existing policy (DAP9523.2 July 2007) is based upon the fact that FEMA suggests communities can use

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A Note From the Editor:

On behalf of the Floodplain Program, I'd like to thank Christopher M. Thoms for thirteen years of service as the creator and editor of this publication. Mr. Thoms has given generously of his creativity, time, and energy. Thankfully, though he passes the torch this fall, his expertise will remain for continued advising and support.

As the new editor of *The Antediluvian*, I'm looking forward to serving Ohio's floodplain management community. The purpose of this newsletter continues to be providing news and information to forward our goal of reducing flood risk and damages throughout the state. To that end, please consider sending me your comments as well as editorials and information that would benefit other communities at Kimberly.Bitters@dnr.state.oh.us or (614) 265-6781.

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permit fees to fund hiring enough staff to handle increased rebuilding work load. The policy also notes that the Public Assistance program can reimburse permit and inspection fees for repair of eligible public facilities and privately owned, insured structures usually include allowances for permit fees.

Please see the below suggested language for the community letter requesting substantial damage assistance from trained OBOA inspectors.

Sample letter to request substantial damage determination assistance from OBOA

_____ [insert date] _____

RE: ESF-14 Mission Request: Substantial Damage Determination Assistance

Dear County Emergency Management Director:

The _____ [insert community name] _____ was impacted by severe weather and flooding that affected north-central Ohio beginning _____ [insert disaster declaration date] _____. As a participant in the National Flood Insurance Program our community has committed to determine if structures in the identified flood hazard areas are “substantially damaged” and to enforce specific flood protection standards in the repair and recovery process. As a result of this flood disaster our local ability to provide inspections and make the substantial damage determinations has been exceeded. Please consider this letter our formal request for assistance from the Ohio Building Officials Association (OBOA) in performing substantial damage determinations.

Our preliminary information indicates that __ [insert number] __ structures located in identified floodplains will need inspection. The structures are located in _____ [complete general location information] _____. Our local floodplain administrator (or community designee) will serve as the point of contact for the Ohio Building Officials Association inspectors:

Name: _____
Address: _____
Phone (Office): _____ (Cell) _____
Email: _____

The OBOA inspectors are providing this service and support in the spirit of mutual aid. The expenses for lodging, fuel, and meals are not reimbursable through the FEMA Public Assistance Program should a Presidential Disaster Declaration be received. To support the inspectors, OBOA needs the following commitments from the requesting community.

1. Lodging arrangement for inspectors.
2. Available fuel for vehicles used to support the inspection determinations.
3. Reimbursement to inspectors for meals during the time they provide support.
4. Assurance that if the requesting community gets reimbursed for other expenses, such as vehicle expenses and labor and benefit expenses, the responding inspector’s community will be reimbursed for those expenses.

Upon commitment, the requesting community should forward this letter with the information required to your county emergency management agency.

Signed:

Community Chief Executive Officer

Severe Weather Awareness

By Christopher M. Thoms, CFM—Program Supervisor
ODNR, Division of Water—Floodplain Management Program

November 11th -17th was this year's Winter Severe Weather Awareness Week in Ohio. The Winter Campaign serves as an annual reminder to be ready—before the event—when Winter Weather Watches, Warnings, and Advisories alert Ohioans that dangerous winter conditions are expected. In that preparation, remember that floods can and do occur in the winter also.

In our continuing efforts to provide comprehensive information to increase severe weather awareness and preparation in the state, the Ohio Committee for Severe Weather Awareness (OCSWA) has redesigned our website www.weathersafety.ohio.gov/ to better provide this important safety information, home safety tips, contacts, and member organizations to all Ohioans.

An important part of our effort is the annual Severe Weather Awareness Poster Contest. Posters (created by elementary-age students from across the state)

are judged and winners are selected from eight state regions for grades one through six. From those regional winners an Overall State Winner is selected. This year, 6th Grader, Alexa Day, from the City of Heath, Licking County won the top spot. Alexa's poster will be used to help promote both the Winter Severe Weather Awareness Week this November and the upcoming Spring Campaign of March 23-29, 2008. Please join us in congratulating Alexa and all the students who won in this year's Severe Weather Awareness Poster Contest. Their work will help raise our awareness of the threats associated with severe weather and help make Ohio a safer place to live.



Pictured from left to right:

Ken Haydu, NWS-Wilmington; Bill Comeaux, NWS-Cleveland; Jeff Walker, Licking County EMA & Homeland Security; Alexa Day, Licking County; Nancy Dragani, OEMA.

The Antediluvian.....

Ohio's Floodplain Management Newsletter

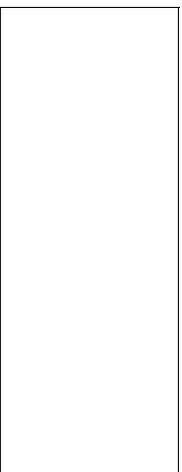


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The Antediluvian is produced by the Division of Water and is supported by funding through a FEMA Cooperative Agreement as part of the Community Assistance Program—State Support Services Element of the National Flood Insurance Program. The contents do not necessarily reflect the views and policies of the federal government.

Kimberly M. Biters, Editor.

Please send address corrections, additions, and other changes to 2045 Morse Road B-2 Columbus, Ohio 43229.

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