



The Antediluvian

Ohio's Floodplain Management Newsletter



{an · te · dā · lōō · vē · ən: Before the Flood}

Volume XX, Issue 1

Ensuring the wise management of Ohio's floodplains

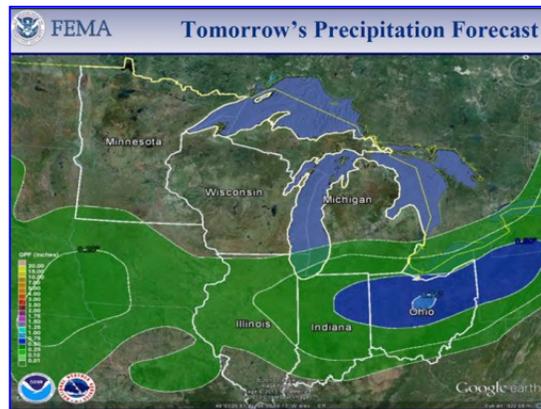
Winter 2014

Undeclared Disasters

Floodplain Management Responsibilities remain even when floodwaters don't trigger disaster declarations

Christopher M. Thoms, CFM, Program Manager, Floodplain Management Program ODNR

The National Weather Service Ohio River Forecast Center is forecasting moderate to major flooding across parts of Ohio. Water levels on creeks and rivers may become a concern. If the threat of flooding on these waterways increases flood watches would be posted for the most vulnerable counties. This can cause flooding of low lying areas and roads near creeks and streams.



These cautionary words (or some variation) have greeted us nearly every month this year, often multiple times a month, (daily from mid-June to

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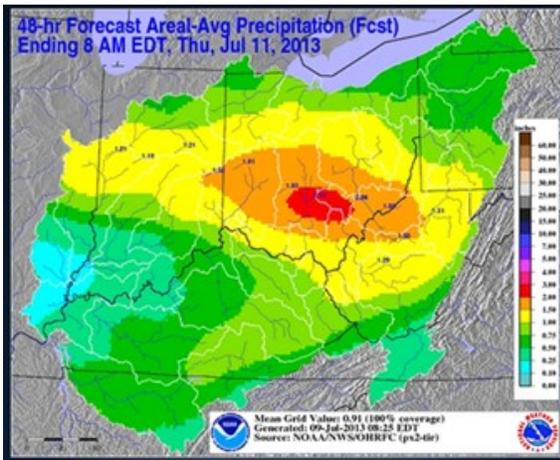
In This Issue	Undeclared Disasters.....	1
	Fun with Redlineation.....	2
	Intergovernmental Agreements.....	4
	Moving Away From "In or Out" Mentality.....	5
	Mr. Toad's Wild Ride: Keeping Track of BW-12.....	8
	Ohio Committee for Severe Weather Awareness.....	13
	Floodplain Services: Values to be Considered.....	15
	Community Acknowledgement Forms.....	18
	Insurance for Non-Flood Related Recovery.....	19
	2013 Statewide Floodplain Conference Recap.....	20
	OFMA Update.....	21
A Few Thank You's.....	21	
2014 Statewide Conference Information.....	22	

Keep Your Community's Information Current!

Please assist the Floodplain Management Program in keeping our records current by submitting new contact information or addresses to Tina Ray at 614-265-6750.

mid-July), and they continue through December. As the *bullseye* forecast map for one such event (see below) clearly illustrated, it seemed Ohio was the target of a lot of rain this year. Thankfully, no fatalities were reported and, with some exceptions, damages were fairly limited. Though persistent and, at times, pernicious, the limited extent of these numerous events, along with a sufficient number of *insured* losses, meant that neither a state nor federal declaration was triggered. While such declarations may result in increased mitigation funds, limited and insured are always good aspects of any disaster.

Yet, regardless of whether a declaration occurs, our floodplain management responsibilities remain. Even following severe weather events that don't include flooding (e.g., June 11th), substantial damages and/or improvements to structures in floodplains trigger your flood safety requirements; so, post-event evaluations are still necessary.



Often (but not always) when particularly severe weather threatens Ohio, the various state and federal agencies gather information in anticipation of and in preparation for offering our support to affected areas. Typically, the Ohio Emergency

Management Agency coordinates these efforts through the State Emergency Operations Center (EOC). Following a severe weather event, requests for assistance should be sent to the EOC through your county emergency management office. By also providing timely reports to ODNR's Floodplain Management Program of the nature and extent of damages in your floodplains, we can facilitate that support and provide specific technical guidance.

It is for this reason that many of you have received and will continue to receive calls and emails from our office, prompting you to report on your floodplain damages. Happily, so far this year, most have been able to report little to no flood-related damages and we all look forward to having fewer occasions to have a need to report. In keeping with that thought, the Floodplain Management Program wishes you all a healthy and un-flooded 2014.



Fun with Redelineation

Katherine Skalak Goepfner, EI, CFM Environmental Specialist, Floodplain Management Program, ODNR

During the Federal Emergency Management Agency's (FEMA) Map Modernization initiative, redelineation of streams occurred quite regularly for both Zone A and Zone AE Special

Continued on page 3

Flood Hazard Areas (SFHAs). This redelineation is still occurring, even now as part of FEMA's Risk MAP process. While in some situations, redelineating the studies will produce flood maps that accurately depict the risk. For Possum Run, located in Logan County, this was not the case. The effective Possum Run SFHA is based on a Soil Conservation Service Study from 1978. This study mapped not only the 1% annual chance flood, but also the floodway. It was then incorporated into the 1984 City of Bellefontaine *Flood Insurance Rate Map (FIRM)*. The major issue with just redelineating the stream, is that the original study located the channel approximately one block west from its location on the effective FIRM. This was not a reconfiguration or a violation issue of Possum Run since the 1970's, but rather a much larger problem. Upon further research, it was determined that the nearby homes were built in the 1940's, and the parcel data seems to match the current stream configuration. On the effective FIRM there is also a reference marker (RM 1) which matches the current stream orientation; however, it does not match the stream centerline located on the effective FIRM. As a result, ODNR knew that this stream should not simply be redelineated as a Zone AE. Instead, ODNR and FEMA came up with several options to resolve this issue and accurately map the risks.

Those options were to: digitize the effective map, redelineate the Zone AE (with bad technical data), remodel the Zone AE (with an updated engineering study), or to remodel as a Zone A. ODNR knew that the ideal situation would be to update the Zone AE of the entire Possum Run, but also realized that this would be the most costly solution. The full Zone AE remodel's cost was driven up by two railroad culvert surveys that would be required. Remodeling as Zone A would be a cheaper solution and could provide the best floodplain risk identification without doing a new detailed study. Leaving the effective map as-is or redelineating the Zone AE in this situation, were not seen as viable options since that would promulgate inaccurate data, undermining the credibility of the mapped floodplains.

The answer to this mapping issue was a hybridized solution, which allowed for accurate, detailed analysis in the highest density areas. Zone AE was remodeled between the culverts, using the railroad as the tie-in points for the modeling. This was done by performing a new, detailed study, which focused on the area with higher structure density, and had the greatest discrepancy between mapped and current stream configuration. Redelineation was implemented outside of the new study boundaries where discrepancy was not significant. Additional survey cost savings were provided by using as-built plans for two out of the six structures. The Logan countywide Preliminary FIRMs and *Flood Insurance Study* have a projected release date of April 2014. Logan County will be the seventy-eighth county that has preliminary Digital FIRMs.



Intergovernmental Agreements

Jarrod M. Hittle, CFM Environmental Specialist, Floodplain Management Program, ODNR

When I started working in the ODNR's Floodplain Management Program, I heard our Program Manager say, "it takes approximately five years to have a good understanding of the NFIP and floodplain management." After spending a year as a local administrator, I felt like I had a "good understanding" of floodplain management. As I quickly found out, there is always something to learn. Now that I am working with floodplain managers all over the state, I have found that if you talk with three different managers you might end up with as many different interpretations of the standards. Many small communities designate the mayor, who is often surprised to find out that s/he is the floodplain administrator. Often they say "I'm not qualified to do this" or "our village doesn't have the resources to do this".

A community official may feel that they do not have a good understanding of floodplain management or may not have the resources to fulfill their responsibilities under the NFIP. If so, they have the option to enter into an intergovernmental agreement with the county to administer their floodplain management regulations. This is a contractual agreement between a community and the county to take over the administrative duties for floodplain management. Before entering into any agreement, it is recommended that regulations are the same across jurisdictions; this will make administration easier and consistent. There are several communities throughout the state that operate under such an agreement. For the agreement to be valid it must be signed by the CEO's of the respective communities and reviewed and approved by the ODNR – Floodplain Management Program office. The communities can negotiate an arrangement to fit their needs. The most common type of agreement we see is where the county takes over the day-to-day floodplain management activities such as issuing permits, answering questions, making flood-zone determinations, construction inspections, and violation investigation. In return for their services the county will collect permit fees and lets the community handle all legal enforcement actions against a property owner who is in violation of the standards, issue variances, and hear any appeals.

Once an agreement is finalized, it does not eliminate the community's responsibility to ensure they are meeting their requirements under the NFIP. For example, if the county is not administering the regulations correctly in a community they are in contract with, it is the community that will face FEMA sanctions for non-compliance, not the county. We recommend that any community with an intergovernmental agreement, stay engaged with floodplain management in their communities, to ensure that it is done consistently and correctly. A successful intergovernmental agreement is an excellent tool to ensure consistent administration and en-

Continued on page 5

forcement of flood damage reduction regulations throughout the County, as well as provide counties with additional income, and communities with one less stress to worry about.

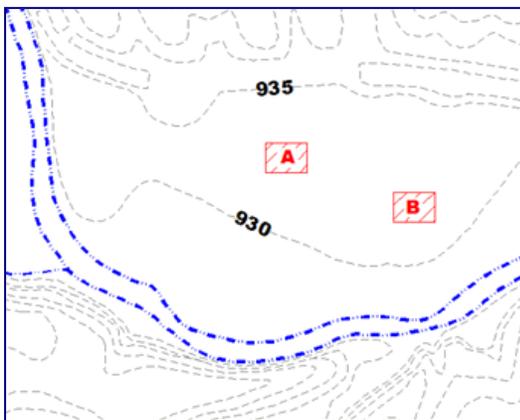
If anyone is interested in obtaining more information, or would like a sample intergovernmental agreement please contact our office at 614-265-6750.



Moving away from “In or Out” Mentality

Melissa E. Menerey Environmental Specialist, Floodplain Management Program, ODNR

We’ve all been there- at a community meeting, on the phone, or via e-mail, helping someone understand a *Flood Insurance Rate Map* (FIRM). They want to know, “am I in or am I out of the floodplain?!” It seems like a simple question; yet it is not as simple as it first appears (like so many things in floodplain management).



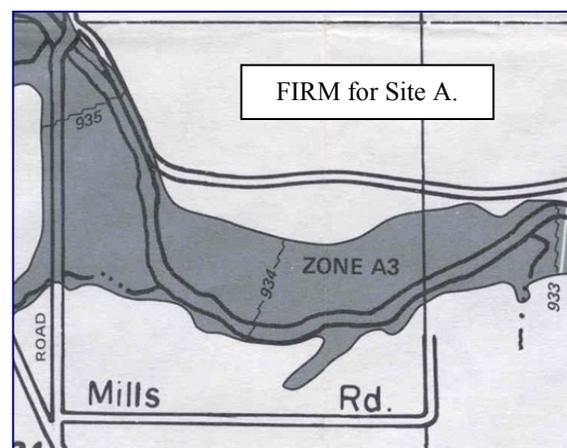
The owners of site A have come to you seeking floodplain advice.

Many people want the quick answer and do not pause and think about what the risks are when building and living in a floodplain. People often view the floodplain as an arbitrary designation made by a faceless government entity that is out of touch with local factors. Thus, they do not think about the data that goes into preparing the maps (elevation, rainfall, and how the flow of water interacts with the terrain).

However, those of us in the floodplain management field know that this designation is based on scientific methods, to determine risk to help keep

property and people safe. We can take these moments of “in or out” to help people better understand their risk.

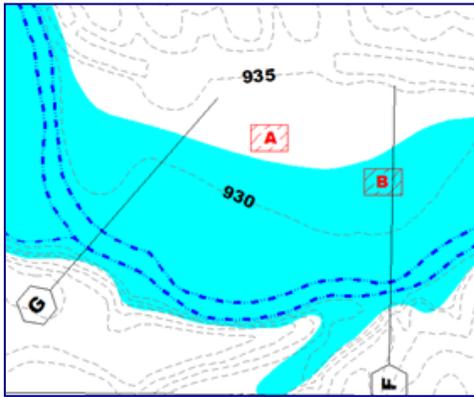
The **Flood Insurance Study** (FIS) is the flood study completed for the National Flood Insurance Program (NFIP) and produces the FIRM which is the legal flood map. As the floodplain manager you must utilize these resources to make a determination about whether a development meets your local Flood Damage Reduction Regulations (resolution or ordinance) or not. However, lenders making the determination for mandatory



Continued on page 6

purchase requirements use the FIRM. Because of this (and since the maps are more accessible than the engineering behind them) the maps often get more face time than the FIS.

What is behind the mapping process? Generally speaking there are four steps: 1) gather topographic data (including floodplain topography and stream cross sections), 2) develop hydrology – figure out the one percent annual chance discharge or stream flow (often with a combination of gage data and regional rainfall curves), 3) perform hydraulic analysis (to determine how the water and land elevation interact), and 4) delineate floodplain boundaries on a map, based on the engineering. So, when we look at the maps we are looking at a simplified version of the engineering and analysis to help non-engineers visualize and plan for the flooding risk.



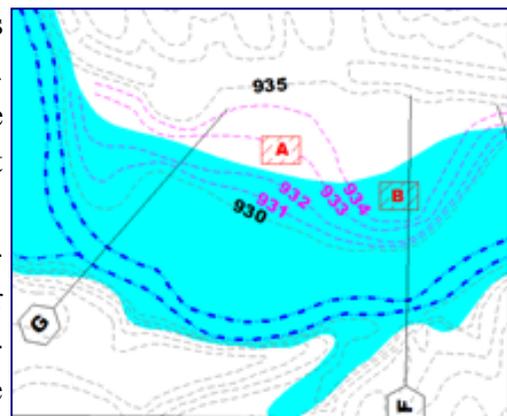
Transfer SFHA to site map.

But launching into a monologue of how the maps are compiled is not typically met with a warm reception; people want to know how it applies to them and their situation. They want it cut and simple – which is just not the case. “In or out” creates a false dichotomy, when risk is more of a continuum. Even sites outside that shaded area on the map possess some risk of flooding. You’ll often hear the phrase, “mother nature doesn’t read maps” to try and convey the apparent disconnect between the maps and experienced flooding.

However, that disconnect is often explained by understanding that the map scale is a limiting factor. The trouble with maps (all maps not just FIRMs) is that no matter how detailed, it cannot capture the world perfectly. Just like a picture of an apple pie will not fully capture the experience of eating the same pie. The floodplain is a dynamic concept that involves many variables, so a map will not be able to capture all of those complexities. Just as a globe cannot capture all the detail of the planet Earth.

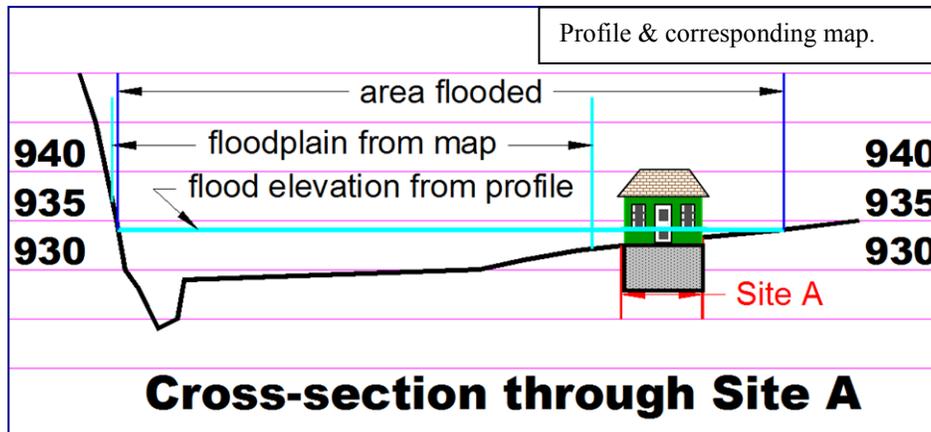
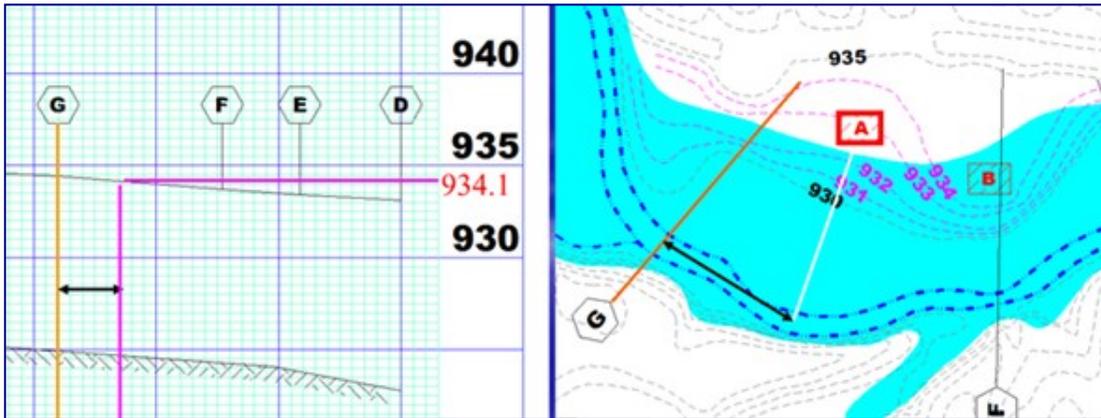
As an example, take site A in the pictures throughout this article—it appears outside of the SFHA. However, as the local official, you know that you have to consult the profile for a better understanding of what is happening at that site.

You may also have access to more recent elevation data that you can employ to help you make a better informed decision. After pulling the best available elevation data you notice something interesting: the profile and more recent elevation data the BFE for the site is 934.1. This means that the map should depict the structure at a higher risk level—even if the map shows it as



Community has better elevation data available.

“out.” The profile and more detailed elevation data help to illustrate that the profile and map need to be used in conjunction with one another to help better communicate risk.



So, while it is easier to read the map and stop there – you are required to utilize the best available data that you have to make a determination. When replying to inquiries, do not set the stage with “you’re out” or “you’re in.” Try to take the several extra minutes to explain that while the map may illustrate a site as being out, there is still a chance of flooding in that area.

It is worth noting that moderate to low risk areas on the maps account for over 20% of NFIP claims and receive one-third of disaster assistance for flooding. If property owners are receptive and want more information about how much having floodwater in a home can cost, the webpage: http://www.floodsmart.gov/floodsmart/pages/flooding_flood_risks/the_cost_of_flooding.jsp has a rudimentary calculator of the potential damage costs, starting with an inch of floodwater in a home. An emphasis on the fact that, as the community official, you are trying to provide preventative measures to reduce the effects of flood damage, may help highlight the importance of the consequences of flood risk, versus being simply “in” or “out” of the floodplain.



Mr. Toad's Wild Ride: *Semper Absurda* or Keeping Track of BW-12

Christopher M. Thoms, CFM Program Manager, Floodplain Management Program, ODNR

Since its last long-term authorization expired in September 2008, the National Flood Insurance Program (NFIP) had been extended (without any changes) through a series of 12 short-term reauthorizations. This included several lapses, four of which totaled 53 days in 2010 alone. Recovery efforts and the related costs from the extensive weather disasters of 2005, provided stark evidence that reform was needed. After nearly eight years of debate, many of us hoped for some stability when the five-year extension known as the **Biggert-Waters Flood Insurance Reform Act of 2012** (BW-12) was finally agreed to.



Specific Reforms

BW-12 is intended to make the NFIP more financially stable by raising rates on certain classes of property to reflect true flood risk. It contains a number of important reforms.

Subsidy Elimination: Potentially, among the most significant is a staged elimination of longstanding premium subsidies for severe loss and severe-repetitive-loss properties ($\approx 9,000$), business properties ($\approx 87,000$) and non-primary residences ($\approx 345,000$). The act also eliminates subsidies for new flood insurance policies or for lapsed policies.

Strengthen Mitigation: Though expressing support for FEMA's mitigation programs, the act is not precise. Ohio has clearly benefitted from NFIP's mitigation initiatives. As Ohio's NFIP-Coordinating Office, we continue to work in concert with the Ohio Emergency Management Agency's Mitigation Branch to help ensure Ohio communities are well positioned to take full advantage of existing or new mitigation programs in conjunction with local hazard mitigation plans. Hopefully, more details will be forthcoming.

Update FIRMs: The act requires the NFIP to complete updating FIRMs. Since *Flood Insurance Studies* and *Flood Insurance Rate Maps* are foundational to sound floodplain management, as Ohio's Cooperating Technical Partner, Mapping Coordinating Office we continue to advocate with Ohio communities for accurate, updated studies and maps.

Cost Analysis: FEMA is to analyze the affordability of flood insurance. FEMA initially estimated two years to complete this analysis in view of the necessary rate increases. FEMA will then report to Congress which in turn will develop a regulatory response

Continued on page 9

(possibly another two years). FEMA's intent was to conduct this study concurrent with the increases. Congresswoman Waters has expressed her intent to have the study completed prior to (complete) implementation of the increases.

Grandfathering and Preferred Risk Policy (PRP) Eligibility Extension

Currently, the NFIP provides rating options to help reduce the financial impact of map changes. Section 100207 calls for discounts to be phased out. Currently, grandfathered rates are not changing. Due to the complexity of the requirement, FEMA must conduct an analysis before full implementation takes place, which is not anticipated until August 2014. Rates are anticipated to rise twenty percent per year over a five year period until they reach full actuarial rates. But grandfathering and PRP Eligibility Extension remain cost-saving options for eligible policyholders (see http://www.fema.gov/media-library-data/41ecfedd3b889396440c30d34b9b91ea/Agent_Quick_RefGuide_September_2013.pdf page 2). According to BW-12, policyholders' whose premiums increase after a map change, will see the new rates phased in by twenty percent of the total difference each year for five years.

Also keep in mind that a separate discount, the **Preferred Risk Policy Eligibility Extension**, will likely be discontinued when (or if) new grandfathering provisions are implemented.

The PRP Eligibility Extension allows structures newly mapped into a high-risk area to temporarily retain lower-cost Preferred Risk rates.

- Structures changing from a low- or moderate-risk area to a high-risk area on new FIRMs may qualify for a **Preferred Risk Policy**
- The eligibility extension rule allows policyholders to retain their PRP for two **policy years** instead of paying the new high-risk premiums.

Premiums for these PRP Eligibility Extension policies increase twenty percent each year (as of October 1, 2013), until they reach the full rates for Zone X.

completed prior to (complete) implementation of the increases.

Reserve Fund Assessment: The Act directs FEMA to collect an amount equal to one percent of their total obligations to better prepare for future catastrophic losses. Since October 1, 2013, all policy owners have seen (or will see) this five percent annual surcharge. This assessment is projected to accumulate about \$2 billion more in revenue over the next decade. The surcharge is considered part of the maximum increase for each rate class and is not added to the maximum average annual premium increase. Where the law requires a higher premium increase than the standard maximum, the Reserve Fund is considered part of the required amount and is not added to the mandated increase.

Premium Calculation: FEMA is to certify it has adopted a modernized risk-based approach and to use historical flood loss data to calculate actuarial premiums for its 5.1 million policyholders. Pre-BW-12, federal flood insurance premiums were increased annually around 10%. Currently, within any risk classification, the maximum annual premium increase

for primary residences is 20%. Not infrequently during conversations about subsidies, references to alleged mis-rated premiums or corresponding mapping defects are made. Verifying and correcting these errors requires (and deserves) time and attention, but used only anecdotally, they tend to distract from the need to have premiums more closely correspond to actual risk.

Rate Adjustments: The NFIP's cap on annual premium increases was raised from 10 to 20 percent and FEMA was given more flexibility to adjust rates within specific risk category. Annual rates increased by 25 percent for owners of pre-FIRM, non-primary residences, beginning January 1, 2013 and with other subsidized properties since August 2013. Starting in late 2014, premiums for properties affected by map changes will increase over five years at a rate of 20 percent annually to reach full-risk rates. All these increases are proposed to continue annually until actuarial rates are achieved. In 2014, full risk rates will be phased in for properties affected by map changes. Premiums may increase further, based on actuarial analysis.

Actuarial rates will apply:

- for new policies
- after the sale/purchase of a property
- after a lapse in insurance coverage
- after substantial damage/improvement
- for properties uninsured as of BW-12 enactment (July 6, 2012)

FEMA stresses that 80 percent of the nearly about 5.6 million federal flood insurance policies in force, were not subsidized. There are almost 1.2 million subsidized policies. Properties that do not meet current requirements (*e.g.*, below the current Base Flood Elevation) could see rates increase dramatically. Properties that meet current requirements still could see increases if new maps subsequently show a higher risk.

Privatized Reinsurance: FEMA is to examine using private reinsurance or catastrophe bonds to supplement its finances. BW-12 requires lenders to also accept NFIP-compatible, non-federal flood insurance to satisfy federal mandatory purchase requirements.

Debt Retirement: FEMA is required to report how they will pay off the existing ≈\$18 billion debt to U.S. Treasury within the next decade (most of it accrued during 2005).

Principle vs. Practice

When disaster strikes, neighbors, communities, counties, states, and the nation help in the recovery. Whether personally or institutionally, we expect individual responsibility but are

Continued on page 11

unwilling to stand idly by while our fellow citizens suffer catastrophic loss. As a society, we have instituted programs to provide efficient and effective flood risk reduction and recovery assistance. First and foremost, consistent, compliant application of local floodplain management standards is the most effective means of reducing flood risk. When flood damages do occur, flood insurance affords a far greater level of financial protection to home and business owners and their local, state, and federal governments than reliance upon disaster assistance alone.

In principle, most would agree that perpetually subsidizing development in high risk flood hazard areas is not a good policy. Initially, with the intention to provide adequate flood insurance coverage for at-risk properties where little to no affordable flood insurance was available, the federal government subsidized the program's premiums. The process was supposed to result in the gradual incorporation of flood risk reduction measures for most, if not all, structures. Not surprisingly, forty years later, many subsidized properties remain at high risk. As one Chubb Group (insurance) representative rhetorically questioned federal officials during FEMA's 2008 *Listening Session* in D.C., *Why are you surprised, when you subsidize at-risk development, that you get more of it?*

In practice, the rate increases (see **Rate Adjustments** above) have, not surprisingly, provoked objections from current or prospective policyholders. Notably, the act's co-sponsor, House Financial Services Committee Ranking Member, Maxine Waters, has joined those objecting, stating, *(f)rom the start, I have made clear that I would lead the effort to fix the unintended consequences of the Biggert-Waters Flood Insurance Reform Act.* In HR 3770, Congresswoman Waters calls for a four-year delay (and possible reimbursement of many) of the rate increases required by BW-12, though nothing delaying or reversing the act's currently required 25% annual increases. It should be noted that such delays would extend beyond BW-12's expiration in 2017. In the short term, lower premium costs (and reimbursements) will be welcomed by policyholders, but the problem will merely be delayed (and compounded), not resolved. In the November 22, 2013 hearings before the House Financial Services Committee, Association of State Floodplain Managers (ASFPM) Executive Director, Chad Berginnis, offered that, instead of delaying these necessary increases, the rate be adjusted downward to 5 percent and the transition period be correspondingly extended. This slower, longer transition would allow property owners to prepare for increases while informing potential buyers of the short and long term costs associated with structures in high risk flood areas. The complete testimony can be read at http://www.floods.org/ace-files/documentlibrary/Hot_Topics/Testimony-NFIP-2013.pdf. The ASFPM has also issued a revised *Flood Insurance Affordability* white paper that is well worth reading. (http://www.floods.org/ace-files/documentlibrary/2012_NFIP_Reform/Flood_Insurance_Affordability_version_10222013.pdf).

Cost Control

However these revision efforts turn out, flood risk-related costs will likely continue to rise. Before BW-12, policyholders whose properties were newly identified as being within a higher-risk area (or higher BFE), could secure a versatile reduced premium by purchasing a policy prior to the new FIRM's effective date. They still can qualify for **grandfathering** whereby they can maintain their previous, lower rate, subject to the additional triggers for actuarial rates listed above (*i.e.*, subsidized rates can no longer be assigned to the new owner.). These standard rates are not subsidized and thus will not increase because of the subsidy phase-out. (see inset box).

Apart from this more restricted grandfathering option, and aside from Letters of Map Change, cost reduction tactics include:

- removing the structure from the flood risk (*e.g.*, community-initiated mitigation projects),
- reducing the level of flood risk to the structure (*e.g.*, incorporating flood resistant materials, elevating lowest floor, floodproofing, *etc.*)
- community-wide premium discounts through the **Community Rating System (CRS)** (The process is complex and can be very involved.) and
- by the (usually short-sighted) means of a higher deductibles (to lower premium costs)

The hoped for stability has yet to be fully realized. BW-12 has proven to be complex and controversial and may yet be redone if not undone (*mutatis mutandis*). Though we will keep you apprised of any developments (FEMA anticipates issuing additional implementation guidance and details sometime in late 2014), we encourage you to let us know as you have questions. We will do our best to supply you an answer. In the meantime, we will continue to intervene in support of sound floodplain management while keeping a close watch on this very wild ride.

Semper Absurda meaning *Always Absurd*, emblazon on the Toad Hall Coat of Arms from Kenneth Grahame's 1908 classic, *The Wind in the Willows* wherein Mr. Toad wreaks havoc upon his community with his reckless driving.

HR3770 seeks to reimburse communities for successful appeals of new maps and studies. The bill would also create a FEMA position of Flood Insurance Advocate to answer current and prospective policyholder questions about the flood mapping process.

Senator Bob Menendez, D-N.J., intends to introduce a similar measure (S.1610).

Mutatis mutandis meaning, *the necessary changes having been made*, used commonly in reference to warranted adjustments made to a law.



Ohio Committee for Severe Weather Awareness Update

Winter Safety Awareness Week was November 17-23, 2013 – it's not too late to prepare!

Melissa E. Menerey, Environmental Specialist, Floodplain Management Program, ODNR

Winter made an early appearance this fall. Northeast Ohio received several inches of heavy snow on October 24. The snow downed tree limbs, caused power outages, and closed schools. Sunday, November 17 kicked off Ohio's Winter Safety Awareness Week. As part of a coordinated effort with the Ohio Committee for Severe Weather Awareness (OCSWA), Governor John R. Kasich encourages Ohioans to update their safety plans, replenish their disaster supply kits to sustain all household members for several days, and prepare themselves and their property for winter-related incidents.

"Winter Safety Week is good time to winterize vehicles," said Nancy Dragani, Executive Director of the Ohio Emergency Management Agency. "Now is a good time to get your car or truck tuned up and your tires and batteries checked. Make sure brakes, lights and turn signals are working properly. Don't forget to check the window washer fluid reservoir, and make sure your wiper blades are in good, working condition."

It is also important to be informed – know before you go. Pay attention to weather forecasts and reports. Listen for reports of school and business closings, snow emergencies, traffic delays or road closures. Plan your drive time accordingly.

To help prepare for winter, OCSWA recommends the following:

Prepare your home for winter. Cut and remove low-hanging and dead tree branches. Ice, snow and strong winds can cause tree limbs to break and fall. Have your gutters cleaned. Snow and ice can build up quickly if gutters are clogged with debris. Have auxiliary heaters, furnaces and fireplaces maintenance checked or serviced before using. If using a portable generator, read instructions thoroughly to guard against carbon monoxide poisoning. Review your homeowner's insurance policy; consider your need for flood insurance.

Prepare winter disaster kits for the home and vehicle. Refresh stored nonperishable foods and bottled water. Change the batteries in your smoke detectors, carbon monoxide detectors and radios. Winter emergency kits should include warm clothing, blankets, flashlights, new batteries, coats, hats, gloves, a battery-operated or hand-cranked radio, first aid kit, and enough nonperishable food and water (one gallon per person, per day) to sustain every family member for several days. Have stored food, bottled water and supplies for your pets, as well.

Continued on page 14

Invest in a NOAA Public Alert/Weather Radio. Every home, school and business should have a tone-alert weather radio with a battery back-up. Weather and public alert radios are programmed to automatically sound an alert during public safety and severe weather events. Click on www.weather.gov/nwr/ for additional information.

Update your disaster preparedness plans. Every home, school, and business should have written plans for the different types of disasters that can occur. Review the plans with the entire family or staff. Everyone should know what to do in the event of a snow or ice storm, a prolonged power outage, a flood or fire. Post contact information for your local emergency management agency. Prepare and practice drills that require sheltering in place and evacuation. Update your emergency contact list and establish a meeting place outside of the home, school or business, where others will know where to find or meet you.

OCSWA is an advocate for emergency preparedness and is comprised of representatives from the following: American Red Cross; Emergency Management Association of Ohio; National Weather Service; Ohio Citizen Corps; Ohio Department of Public Safety-Emergency Management Agency; Ohio Insurance Institute; Ohio Department of Commerce – State Fire Marshal; Ohio Departments of Aging, Education, Health, Insurance, Mental Health, Natural Resources, and Transportation, and WBNS-10TV.

For additional information on winter weather safety and severe weather preparedness, visit OCSWA's site at www.weathersafety.ohio.gov. You can also follow OCSWA on Twitter [@OHWxAwareness](https://twitter.com/OHWxAwareness).

Be sure to note the Weather Safety Week Events of 2014!

Weather Safety Week Events 2014

National Severe Weather Preparedness Week: March 2-8, 2014

Ohio's Spring Severe Weather Awareness Week: March 2-8, 2014

Statewide Tornado Drill: Wednesday, March 5 at 9:50 am*

*Make Up Date (in case of inclement weather) Friday, March 7

National Flood Awareness Week: March 16-20, 2014

Heat Awareness Day: Friday, May 23, 2014

National Lightning Safety Awareness Week: June 22-28, 2014

Ohio's Winter Safety Awareness Week: November 16-22, 2014



Floodplain Services: Value That Needs To Be Considered

Randall L. Keitz, P.E., Water Resources Engineer, Floodplain Management Program, ODNR

The natural functions and processes of floodplains provide *services* that benefit society either directly or indirectly. An example of a *floodplain service* would be waste assimilation (*i.e.*, capture of nitrogen and phosphorus). Floodplains perform a variety of essential functions and processes including floodwater conveyance and storage, groundwater recharge, wave attenuation (*i.e.*, reduce downstream flooding), streambank erosion control, reduction in sedimentation rates, water quality maintenance and support of highly productive ecosystems to name a few.



Left bank and floodplain of the Upper Cuyahoga River managed in a natural condition (Portage County, Ohio). Photograph was taken by Randy Keitz on October 17, 2013.

The publication entitled *The Natural and Beneficial Functions of Floodplains, Reducing Flood Losses by Protecting and Restoring the Floodplain Environment* provides a list of some valuable floodplain services, which include the following:

- Store and convey floodwaters, thus diminishing floodwater velocities and resulting in the reduction of flood damages and flood related erosion.

Continued on page 16

- Increase soil fertility as floodplains naturally replenish the nutrients of the surrounding soils during periodic inundation.
- Improve water quality and quantity by providing areas of ground water recharge while also filtering impurities and nutrients.
- Support biodiversity, providing breeding and feeding grounds for fish and a wide variety of wildlife including endangered species.
- Contain immense forestry resources, including significant carbon sequestration potential.
- Enhance aesthetic value and recreational uses.¹

Natural capital and its associated services are more difficult to financially quantify in terms of comparable economic services and manufactured capital, therefore, they are frequently given little economic weight in cost-benefit analyses. However, there have been efforts over the past decade or more to quantify the value of floodplain services and the services provided to society by other land conditions (*e.g.*, forests, wetlands, *etc.*). A study in the U.S. by Constanza, *et al.*, estimates that the average value of floodplain services received by society to be \$7,927 per acre per year in 1994 dollars and \$12,492 per acre per year in 2013 dollars (conversion to 2013 dollars used the CPI inflation calculator available at the US Department of Labor website). For comparison, the same study estimates the average value of services received by society from forest land to be \$392 per acre per year in 1994 dollars (\$618 per acre per year in 2013 dollars).² This comparison of average annual services by land type provides some insight on just how valuable floodplain services are to society (see Table below).

Land Type	Floodplain	Forest
Average Value of Annual Services per Acre in 2013 dollars ²	\$12,492	\$618

Another study on the value of floodplain services in the Czech Republic published in 2008 identifies the value of floodplain services received by society to be \$10,931 per acre per year.³ It does not specifically state the year of the valuation, but assuming it was in 2007 dollars then the value would adjust to \$11,704 dollars per acre per year in 2013 dollars, which is rather similar to the Constanza study results. It is important to note that both studies expect that the actual value of floodplain services to be higher than estimated, because some known floodplain services were not valued within the study.

In Ohio, recognition of this value from floodplain services occurs on a daily basis for the City of Akron and its citizens. The City of Akron owns 33% of the land surrounding the Upper Cuyahoga River in Portage and Geauga Counties and keeps this land, which is mostly flood-

Continued on page 17

plain and wetlands, in a natural and undeveloped state (see above photograph). The Upper Cuyahoga River flows into Lake Rockwell, which began operations in 1915 as the City of Akron's drinking water supply. The City purchased much of the land it owns along the Cuyahoga River during the construction of Lake Rockwell, but the City will still purchase stream-side properties today, if available. The natural and undeveloped land along this river treats the surface water from impurities, prevents stream bank erosion, traps suspended sediments (*i.e.*, silts and clays) on its floodplain due to frequent out-of-bank flooding, and many more benefits as previously mentioned in order to keep water treatment costs low at the City of Akron's water treatment plant located adjacent to Lake Rockwell. Further, floodplain damages to structures (*e.g.*, homes and business) are essentially eliminated.

The *vision* provided by the community leaders in the City of Akron nearly 100 years ago is still paying great dividends to its citizens today. In addition, 25 miles of the Upper Cuyahoga River was designated a State Scenic River in 1974. This provides the City of Akron additional support from the ODNR in maintaining the land adjacent to the river in a natural condition so that a safer, better quality water supply flows to Lake Rockwell and ultimately lowers the drinking water costs for the citizens of Akron.

Given the great potential value provided by floodplains, their purchase by communities and maintaining them in a natural condition, as in the case with the City of Akron, can be a logical and economical strategy, plus it can reduce or eliminate future flood damages. However, a timelier alternative for communities to preserve and restore the services of their floodplains is to enact *higher standards* within your floodplain management regulations. Two higher standards that support the retention and creation of floodplain services include lowering the floodway's allowable rise from 1 foot to 0.1 foot and requiring compensatory storage. More on higher standards can be located in the ***Ohio Floodplain Regulation Criteria***, revised August 2006, which can be downloaded from the ODNR Floodplain Management Program website.

Decisions made today regarding your floodplain management strategy may benefit your citizens for generations to come as in the case with the City of Akron. The question is - will it be your community?

1. Costanza, *et al.*, *The Value of the World's Ecosystem Services and Natural Capital*, Nature, Vol. 387, May 1997, pp. 253-260.

2. A Report to Congress by the Task Force on the Natural and Beneficial Functions of the Floodplain, *The Natural and Beneficial Functions of Floodplains, Reducing Flood Losses by Protecting and Restoring the Floodplain Environment*, June 2002.

3. ProAct Network, *Case Study: Ecosystem Services of a Floodplain with Preserved Hydrological Regime – River Luznice Floodplain, Czech Republic*. In: *The Role of Environmental Management in Disaster Risk Reduction and Climate Change Adaptation*, August 2008, pp. 79-88.



Community Acknowledgment Forms

Matthew J. Knittel, Environmental Specialist, Floodplain Management Program, ODNR

Over the past few months I've received phone calls from a few community officials inquiring about the "Community Acknowledgment Form". A citizen had approached them, either because they believed their property was incorrectly mapped into the floodway, or because they wish to place fill on their property to remove the property from the floodplain. Wisely, before signing a document they were not 100% familiar with, they contacted ODNR to learn more about this form.

The Community Acknowledgment Form appears to be relatively straight forward: It must be signed by the community official in charge of floodplain regulation, for a project involving a Letter of Map Revision (LOMR), including ones based on fill (LOMR-F), or a Letter of Map Amendment (LOMA), for a property located within the floodway. The stated intent of this form is to have evidence that the community was aware that these Letters of Map Change (LOMC) were occurring, and in the case of the LOMR-F, that fill is being placed within the floodplain. Again, this seems pretty cut and dry, however, as we have seen, with FEMA, there is a certain unspoken element to the Community Acknowledgment Form.

The Ohio Department of Natural Resources has worked with communities that have signed a Community Acknowledgment Form for a specific property, and at some point after the signing of that form, the structure on the property experienced flood damage. Now, the Community Acknowledgment Form effectively removed the structure from the mapped floodplain, and thus, the community has no regulatory control over said structure. However, in the past, in this situation, communities have been penalized by FEMA. The Community Acknowledgment Form, is seen by FEMA (at least based on their actions in the past) as a document that states that the structure is "reasonably safe from flooding." This is further interpreted by FEMA (again, based on their actions in the past) as: this structure will not experience flood damage.

Now, this sentiment is not stated anywhere on the Community Acknowledgment Form, and is interpreted this way based on actions that FEMA has taken. Thus, when a community approaches ODNR and asks "Should I sign this form?" we advise the community on how FEMA has treated this document, so as not to cause issues down the road.

This leads into another tricky situation: How do you explain to your citizen who needs the form to move on with their LOMC request, that the community is uncomfortable signing the form, based on past interpretation of the form; and not on what is directly stated on the form itself? Ultimately, the decision is up to the community whether they want to sign the form. However, most communities don't like upsetting their citizens, which could be the potential result of not signing; so what is the community to do?

Continued on page 19

ODNR advises communities to work with citizens to ensure that additional protective measures are taken on these properties if the Community Acknowledgment Form is signed. For example: A citizen who wishes to place fill to remove their property from the floodplain, could agree with the community that basements will not be installed in any structures built on the property. This ensures further safety for that structure, as well as any residents and property in the structure.

Hopefully, in the future, if you receive a request to sign a Community Acknowledgment Form, you'll know to examine the property/structure, and work with the owner, to ensure that the property/structure is reasonably safe from flooding in the future, and can sign the form without any worry or hassle. However, feel free to contact our offices if you have further questions or concerns when working with a Community Acknowledgment Form.



Insurance for Non-Flood Related Floodplain Recovery Codes and Compliance Insurance Rider

Christopher M. Thoms, CFM, Program Manager, Floodplain Management Program, ODNR

As you should already know, a **Standard Flood Insurance Policy** automatically contains an *Increased Cost of Compliance* (ICC) benefit. ICC pays over and above the claim amount, (up to the policy's maximum value but no more than \$30,000) to bring a substantially damaged building up to local floodplain code. ICC only provides this benefit for flood-caused damage, obviously, as it is a rider on a single peril policy.

While flood is not a covered peril in almost all homeowners' policies, many broad form policies contain or offer *Codes and Compliance* coverage that will assist homeowners to rebuild according to their local floodplain code, when their home was substantially damaged by a covered peril (*e.g.*, tornado, fire, rain, *etc.*). As long as the initial damage is caused by a covered peril, coverage would apply. Homeowners should check with their insurance agent to see if their policy has or offers this benefit.

2013 Ohio Statewide Floodplain Management Conference Recap

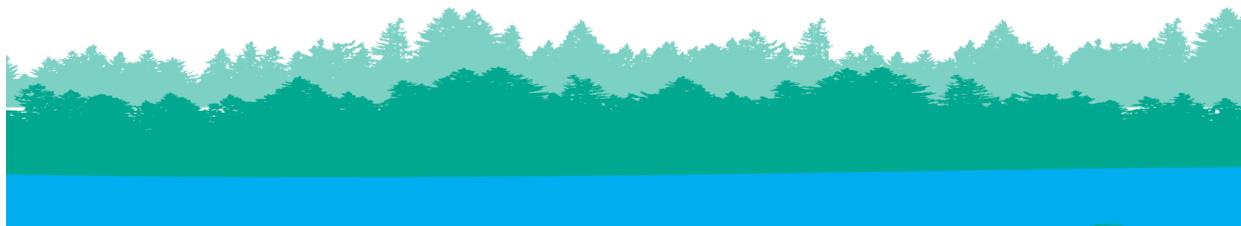
Alicia A. Silverio, CFM, Senior Environmental Specialist, Floodplain Management Program, ODNR

The 2013 Ohio Statewide Floodplain Management Conference was held on August 28-29, 2013 at the Doubletree Hotel in Worthington, Ohio. The theme for the two-day conference, *Remembering the Great Flood of 1913 and Planning for the Future – 100 Years of Managing Ohio's Floodplains*, focused on recalling the 1913 flood, immediate impacts to affected communities, and how this event changed our perspectives on managing flood risk in Ohio – even today.

James Morris, Director of the USGS Ohio/Michigan Commonwealth, served as the Keynote Speaker and discussed the importance of data collection, monitoring, innovations and technology that allow us to predict flood impacts for better floodplain management. The conference offered three continuous tracks covering a wide range of floodplain management issues. The agenda included 54 Speakers who gave insightful and detailed presentations including but not limited to the Great Flood of 1913, Biggert-Waters National Flood Insurance Program Reform Act of 2012, Mitigation, Risk MAP, Green Infrastructure, Floodplain Management “Boot Camp”, *etc...* The conference was attended by over 180 local, state, and federal government officials as well as private sector consultants. The 2014 Sponsors for the annual conference included, CT Consultants, EMH&T, Michael Baker, ms consultants, inc., SmartVent, and Stantec. The conference also offered exhibits from the, Professional Land Surveyors of Ohio, Ohio Emergency Management Agency, Ohio Floodplain Management Association, and the United States Geological Survey.

During the conference, Ohio Floodplain Management Association (OFMA) presented the Distinguished Member Service Award to Jim Mickey in recognition of his years of service to the Managing Board. Additionally, Medina County and the City of Shelby both received honors from the Federal Emergency Management Agency (FEMA) for lowering their Community Rating System (CRS) ratings.

OFMA held the organization's annual General Membership Meeting at the conference when the President reported on the organization's activities throughout the year. The annual Election of Officers was held for three Member-at-Large positions, where Matt Whitehead, Mike Mihalisin, and Jerry Brems were elected to the Managing Board.



Ohio Floodplain Management Association (OFMA) Update

Alicia A. Silverio, CFM, Senior Environmental Specialist, Floodplain Management Program, ODNR

Throughout the past year, the Ohio Floodplain Management Association (OFMA) has been working to develop and offer educational opportunities for floodplain management professionals throughout the State. OFMA has determined that “education” is a priority for the organization and has focused its efforts on providing training opportunities for floodplain management professionals, such as the Ohio Statewide Floodplain Management Conference, Mock Disaster, Certified Floodplain Manager (CFM) Refresher Course, and Regional CFM Exams *etc...* The organization has updated its Strategy and will be posting it on the OFMA website at www.ofma.org in January 2014. OFMA is also working to develop a schedule of CFM Exams and Refresher Course opportunities for 2014.

MANY THANKS!

We would like to sincerely THANK the following:

George Hadden and the Lake County Engineer’s Office for hosting the L273 Managing Floodplain Development Through the NFIP Course (March 2013)

CT Consultants, EMH&T, Michael Baker, ms consultants, inc., SmartVent, and Stantec for sponsoring the 2013 Ohio Statewide Floodplain Management Conference

All the 2013 Ohio Statewide Floodplain Management Conference Presenters
2013 Regional CFM Exam Proctors:

Sarah Gartland
Emily Whitehead
Nick Mills
Todd Richard
Jason Farrell
Bob Neubert
Ray Mennega

Jim Morris for serving at the Keynote Speaker for the 2013 Ohio Statewide Floodplain Management Conference

Matt Whitehead for coordinating the 2013 OFMA Golf Outing

Cindy Crecelius for instructing the CFM Refresher Courses

CALL FOR PRESENTERS**2014 Ohio Statewide Floodplain Management Conference****August 27-28, 2014****Doubletree Hotel Columbus/Worthington****175 Hutchinson Avenue, Columbus, OH 43235**

THEME: Strengthening Communities through Floodplain Management

OFMA is seeking presentations for this conference that focus on the following:

National Flood Insurance Program (NFIP)
Regulations
Flood Insurance
Flood Hazard Mapping
Flood Mitigation
Structural Flood Control (Dams, Levees, etc...)
Data, Engineering, & Modeling
Geographic Information Systems (GIS)
Water Resources Management
Education & Outreach
Green Infrastructure & Stormwater Management
Building Code

Submission Information. The Call for Presenters is open to anyone interested in making a presentation to the conference. Submissions will be reviewed by the Conference Planning Committee and selected based on content and relevance to floodplain management. **Submissions must be received by March 14, 2014** to be considered for presentation at the conference. Incomplete or late submissions may be refused.

Guidelines:

Submissions must be concise, limited to 500 words, and provide an accurate description of the policy, educational, scientific, engineering, or technological material to be presented at the conference.

Submissions must be accompanied by the Presentation Submittal Form, which can be obtained from the ODNR website at: <http://www.dnr.state.oh.us/tabid/17934/Default.aspx>

The Presentation Submittal Form must be completed and forwarded to the Conference Chair along with the biographical sketch(es) of the author(s), and the summary of the Presentation.

Submissions should be forwarded by email to alicia.silverio@dnr.state.oh.us as a Microsoft Word attachment. (You will receive a return email to confirm that your submission has been received. If you do not have email or internet access, or have other questions, contact Conference Chair Alicia Silverio at 614-265-1006.

Authors selected as Presenters:

- will be notified of acceptance of the presentation by March 28, 2014.
must provide a copy of the presentation to the Conference Chair at the conference.

Audience. The Statewide Conference will offer three tracks to accommodate attendees and their

various levels of floodplain management knowledge and experience. As the only floodplain management conference in Ohio, this annual event attracts a broad audience including local, state and federal government officials, engineers, consultants, planners, related non-profit organizations, and involved citizens. Please develop your presentation using the sort of detailed and useful material that you would like to have presented to yourself. Presentations that will interest the audience and generate conversation are encouraged. Presentations focused on delivering a “sales pitch” approach will not be accepted.

Length and focus of presentation. Presentations will be allotted 30, 45, or 60 minute sessions, unless otherwise indicated on the agenda. Please emphasize conclusions and recommendations in your presentation based upon your professional experience(s).

Audio-Visual. Authors selected as Presenters will use laptop computers and LCD projectors provided on-site, utilizing the Microsoft PowerPoint® program. Additionally, each presentation must be provided to the Conference Chair at the conference via USB flash drive. A moderator will monitor each breakout session. There will be no extra time between speakers; therefore ‘swapping out’ personal equipment is strongly discouraged. Laser pointers will be available for use.

Travel arrangements. Presenters are responsible for their own hotel, air, and other travel arrangements. Conference facility and accommodations information will be posted at: <http://www.dnr.state.oh.us/tabid/17934/Default.aspx>

Display materials and handouts. All Presenters are encouraged to provide the Conference Chair with handouts of the information delivered during their presentation for distribution to Conference Attendees. These handouts must be submitted to the Conference Chair by **August 15th, 2014**. Presenters may also bring books, reports, pamphlets, handouts, and other materials that may be of interest to the audience.

For more information about the “**2014 Ohio Statewide Floodplain Management Conference**”, please contact Alicia Silverio at 614-265-1006 or alicia.silverio@dnr.state.oh.us.

Dates to Remember:

3/14/14	Submissions Due
3/28/14	Presenters Notified of Presentation Acceptance
8/21/14	Registration Cancellation Deadline
8/26/14	CFM Refresher (@ ODNR)
8/28/14	CFM Exam (@ ODNR)
8/27/14	Ohio Statewide Floodplain Management Conference – Day 1 (@ Doubletree Columbus/Worthington)
8/28/14	Ohio Statewide Floodplain Management Conference – Day 2 (@ Doubletree Columbus/Worthington)
8/28/14	CFM Exam (@ Doubletree Columbus/Worthington)
8/29/14	OFMA Golf Outing

The Antediluvian

Ohio's Floodplain Management Newsletter

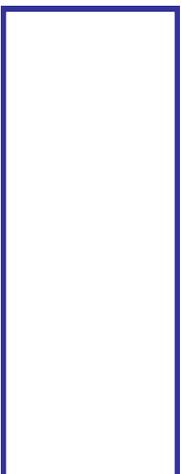


Division of Soil and Water Resources
2045 Morse Road, B-2
Columbus, Ohio 43229

John R. Kasich, Governor

James Zehringer, Director

Michael D. Bailey, Chief



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Matthew J. Knittel, Editor.

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