The Antediluvian

Ohio's Floodplain Management Newsletter

{an · te´· də · lōō´· vē · ən: **Before the Flood**}

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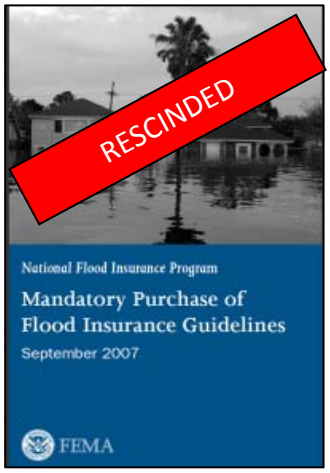
Private Market Flood Insurance (part 1)

Christopher M. Thoms, CFM, Floodplain Management Program Manager - ODNR, Division of Soil & Water Resources

Recently, people in many states, including Ohio, have purchased private (non-federal) flood insurance. Though **Excess and Surplus** (E&S) policies have long been available, such policies had been primarily issued on high end, commercial properties, whose owners sought to insure property with value greater than the federal insurance limits. In those circumstances, owners added E&S policies to standard federal policies. However, the nearly ten-fold cost difference proved a bar to most single family and small business structures. Into the '90s, it was not unheard for manufactured homes to have flood insurance offered as part of vehicular coverage, but as losses mounted, that product was no longer offered.



The current NFIP reforms eliminate subsidies, increase premiums, and require a study of the private market's ability to assume a portion of the nation's flood insurance risk. Some see an opportunity for the private market, but there are still hurdles. Fitch Ratings, an international credit rating agency cautioned,… *it remains to be seen if the private reinsurance or insurance markets would be able to provide sufficient capacity for flood risk at an economically viable price. The reduction or elimination of federal assistance would create a potential opportunity for traditional private (re)insurers or alternative capital markets to serve this sizable market.*[1]

Another obstacle is that, since for a prolonged period, the federal government was virtually the only flood insurance option available, both lenders and borrowers are hesitant to consider alternatives. In its March 16, 2012 memoranda for Write Your Own (WYO) company principal coordinators, lending regulators, Federal agency lenders, government-sponsored enterprises, and lender trade associations; FEMA attempted to clarify their position about non-Federal flood insurance and how such insurance policies should be evaluated by lenders. The memo states,

"One of the unforeseen consequences of FEMA's issuance of the ***Mandatory Flood Insurance Purchase Guidelines*** is that they have in some cases been accorded more authority than they have or were intended to have. One of the areas where this has caused a great deal of misunderstanding is the acceptability of private flood insurance policies to satisfy mandatory purchase requirements of the *Flood Disaster Protection Act of 1973*, as amended. In providing assistance to lenders on the acceptability of private flood insurance policies in lieu of the *Standard Flood Insurance Policy* from the

Inside this issue:

National Flood Insurance Program, the ***Guidelines*** list six elements that FEMA suggests that a lender consider in evaluating a private policy. These elements are not meant to be exclusive and if a lender is satisfied that a private policy adequately protects his security for a loan despite not containing some of these elements or differing from them, it is within his authority to accept the private policy. FEMA has no authority to rule on the acceptability of private insurance policies and any technical guidance that FEMA issues on the matter is to be regarded solely as advisory and not regulatory in nature."

The six elements referenced above are:

1. **Licensure** The insurer must be licensed, admitted, or otherwise approved to do business in the jurisdiction where the building is located, by the insurance regulator of that jurisdiction, except as indicated in 2 below.
2. **Surplus Lines Recognition** (Non-Residential Commercial) In the case of non-residential commercial property insurance issued under a policy of difference in conditions, multiple peril, all risk, or other blanket coverage, the insurer should be recognized, or not disapproved, as a surplus lines insurer by the insurance regulator of the jurisdiction where the building is located.
3. **Requirement of 45-Day Cancellation/ Non-Renewal Notice** The private flood insurance policy should include a requirement for the insurer to give 45 days' written notice of cancellation or non-renewal to the insured with respect to the flood insurance coverage. The policy should also state that, to be effective, such notice must be mailed to both the insured and the lender or Federal agency lender, and must include information about the avail-ability of flood insurance coverage under the NFIP. The policy should be as restrictive in its cancellation provisions as the SFIP.
4. **Breadth of Policy Coverage** The policy must guarantee that the flood insurance coverage, considering deductibles, exclusions, and conditions offered by the insurer, is at least as broad as the coverage under the SFIP.
5. **Strength of Mortgage Interest Clause** Lenders must ensure that a mortgage interest clause similar to that contained in the General Conditions section of the SFIP is contained in the policy.
6. **Legal Recourse** The policy must contain a provision that the insured must file suit within 1 year after the date of written denial of all or part of the claim.[2]

Complicating matters further, FEMA subsequently withdrew their ***Guidelines*** publication. *FEMA has decided the best course of action, to prevent confusion on the part of our stakeholders, is to rescind the Guidelines. This document will no longer be offered and will not be updated in the future. Lenders should consult their respective regulatory agency for information regarding compliance with the mandatory purchase requirements (see https://www.fema.gov/media-library/assets/documents/11705).*

Five federal regulatory agencies are considering a rule that could boost sales of private flood insurance. The proposals would require lenders to accept private flood policies to satisfy the mandate that certain homebuyers in flood hazard areas purchase flood insurance.

A recent Government Accountability Office (GAO) report, *Strategies (sic) for Increasing Private Sector Involvement*, found that even if private insurers can be brought into the flood insurance market, the government will still have to play a role or several roles as reinsurer, residual market, subsidy provider or mitigation enforcer.

The GAO cautioned that obstacles to more private insurer involvement include political and consumer resistance to full cost-based pricing of flood risks, a resistance demonstrated by the current attempts in the Senate and the House to roll back rate increases called for under the Biggert-Waters law. Delaying Biggert-Waters may reinforce private insurers' skepticism that they would ever be permitted to charge adequate rates and make their participation unlikely in the foreseeable future, the GAO report concluded.

Even after running this gauntlet, there are additional concerns and considerations for policy buyers, when deciding whether private or federal flood insurance is the appropriate choice for them. In the next edition of ***The Antediluvian***, we will address some of these. As always, should you have any questions, please call our office at (614) 265-6750.

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[1] *Private Market Could Grow As Government Flood Insurance Prices Rise: Fitch Insurance Journal (Online) March 2014*

[2] *Mandatory Purchase of Flood Insurance Guidelines FEMA 9/07 pp.57-58 (rescinded)*

Floods: Recurrence Intervals and 100-year Floods

United States Geological Survey - http://water.usgs.gov/edu/100yearflood.html

Possibly you can remember when a really big rain, be it from a hurricane or a large frontal system, hit your town. If flood conditions occurred because of the rain then you might have heard the radio or TV weatherman say something like "This storm has resulted in a 100-year flood on Soandso River, which crested at a stage of 20 feet." Obviously, this means that the river reached a peak stage (height) that happens only once every 100 years, right? A hydrologist would answer "Well, not exactly." Hydrologists don't like to hear a term like "100-year flood" because, scientifically, it is a misinterpretation of terminology that leads to a misconception of what a 100-year flood really is.

Instead of the term "100-year flood" a hydrologist would rather describe this extreme hydrologic event as a flood having a 100-year recurrence interval. What this means is described in detail below, but a short explanation is that, according to historical data about rainfall and stream stage, the probability of Soandso River reaching a stage of 20 feet is once in 100 years. In other words, a flood of that magnitude has a 1 percent chance of happening in any year.

What is a recurrence interval?

"100-year floods can happen 2 years in a row"

Statistical techniques, through a process called frequency analysis, are used to estimate the probability of the occurrence of a given precipitation event. The recurrence interval is based on the probability that the given event will be equaled or exceeded in any given year. For example, assume there is a 1 in 50 chance that 6.60 inches of rain will fall in a certain area in a 24-hour period during any given year. Thus, a rainfall total of 6.60 inches in a consecutive 24-hour period is said to have a 50-year recurrence interval. Likewise, using a frequency analysis (Interagency Advisory Committee on Water Data, 1982) there is a 1 in 100 chance that a streamflow of 15,000 cubic feet per second (ft3/s) will occur during any year at a certain streamflow-measurement site. Thus, a peak flow of 15,000 ft^3/s at the site is said to have a 100-year recurrence interval. Rainfall recurrence intervals are based on both the magnitude and the duration of a rainfall event, whereas streamflow recurrence intervals are based solely on the magnitude of the annual peak flow.

Ten or more years of data are required to perform a frequency analysis for the determination of recurrence intervals. Of course, the more years of historical data the better—a hydrologist will have more confidence on an analysis of a river with 30 years of record than one based on 10 years of record.

Recurrence intervals for the annual peak streamflow at a given location change if there are significant changes in the flow patterns at that location, possibly caused by an impoundment or diversion of flow. The effects of development (conversion of land from forested or agricultural uses to commercial, residential, or industrial uses) on peak flows is generally much greater for low-recurrence interval floods than for high-recurrence interval floods, such as 25- 50- or 100-year floods. During these larger floods, the soil is saturated and does not have the capacity to absorb additional rainfall. Under these conditions, essentially all of the rain that falls, whether on paved surfaces or on saturated soil, runs off and becomes streamflow.

How can we have two "100-year floods" in less than two years?

This question points out the importance of proper ter-

Recurrence Intervals and Probabilities of Occurrences

Recurrence interval in years	Probability of occurrence in any given year	Percent chance of occurrence in any given year	Annual exceedance percentage (AEP)
100	1 in 100	1	1
50	1 in 50	2	0.50
25	1 in 25	4	0.25
10	1 in 10	10	0.10
5	1 in 5	20	0.05
1	1 in 2	50	0.02

minology. The term "100-year flood" is used in an attempt to simplify the definition of a flood that statistically has a 1-percent chance of occurring in any given year. Likewise, the term "100-year storm" is used to define a rainfall event that statistically has this same 1-percent chance of occurring. In other words, over the course of 1 million years, these events would be expected to occur 10,000 times. But, just because it rained 10 inches in one day last year doesn't mean it can't rain 10 inches in one day again this year.

What is an Annual Exceedance Probability?

The USGS and other agencies often refer to the percent chance of occurrence as an Annual Exceedance Probability or AEP. An AEP is always a fraction of one. So a 0.2 AEP flood has a 20% chance of occurring in any given year, and this corresponds to a 5-year recurrence-interval flood. Recurrence-interval terminology tends to be more understandable for flood intensity comparisons. However, AEP terminology reminds the observer that a rare flood does not reduce the chances of another rare flood within a short time period.

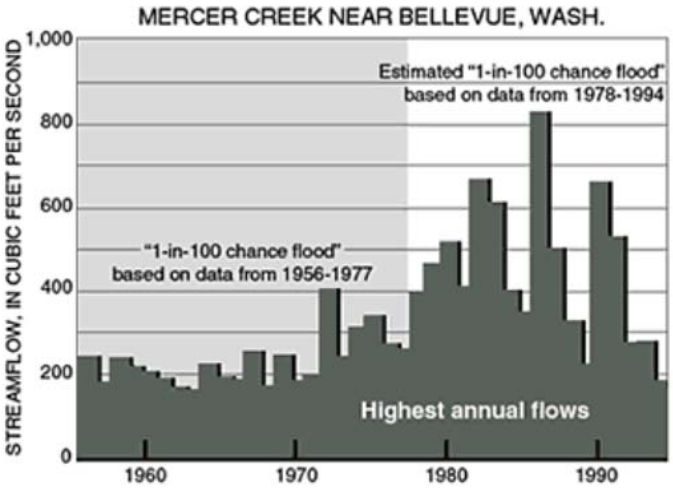
Does a 100-year storm always cause a 100-year flood?

No. Several factors can independently influence the cause-and-effect relation between rainfall and streamflow.

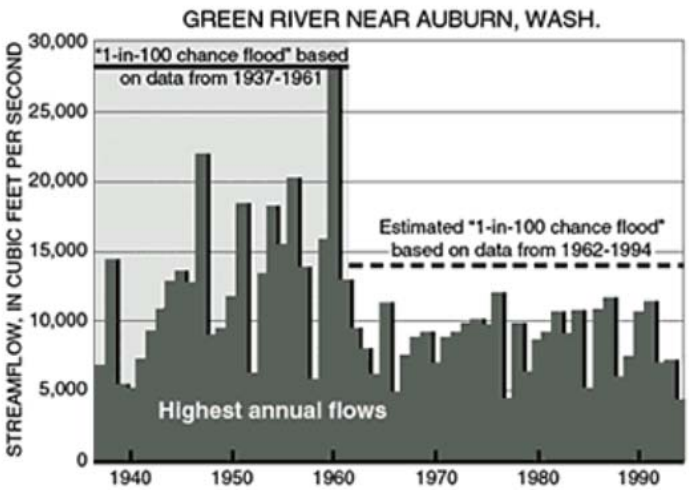
Extent of rainfall in the watershed: When rainfall data are collected at a point within a stream basin, it is highly unlikely that this same amount of rainfall occurred uniformly throughout the entire basin. During intensely localized storms, rainfall amounts throughout the basin can differ greatly from the rainfall amount measured at the location of the rain gage. Some parts of the basin may even remain dry, supplying no additional runoff to the streamflow and lessening the impact of the storm.

Soil saturation before the storm: Existing conditions prior to the storm can influence the amount of stormwater runoff into the stream system. Dry soil allows greater infiltration of rainfall and reduces the amount of runoff entering the stream. Conversely, soil that is already wet from previous rains has a lower capacity for infiltration, allowing more runoff to enter the stream.

Relation between the size of the watershed and duration of the storm: Another factor to consider is the relation between the duration of the storm and the size of the stream basin in which the storm occurs. For example, a 100-year storm of 30-minutes duration in a 1-square-mile (mi^2) basin will have a more significant effect on streamflow than the same storm in a 50-mi2 basin. Generally, streams with larger drainage areas require storms of longer duration for a significant increase in streamflow to occur. These and other factors determine whether or not a 100-year storm will produce a 100-year flood.



Rapid urban development in the Mercer Creek Basin since 1977 has increased the estimated magnitude of the "1-in-100 chance flood" as Bellevue, Wash.



The completion of Howard Hanson Dam on the Green River has decreased the magnitude of the "1-in-100 chance flood" as Auburn, Wash. since 1961.

The 100-year flood level can change

Since the 100-year flood level is statistically computed using past, existing data, as more data comes in, the level of the 100-year flood will change (especially if a huge flood hits in the current year). As more data are collected, or when a river basin is altered in a way that affects the flow of water in the river, scientists re-evaluate the frequency of flooding. Dams and urban development are examples of some man-made changes in a basin that affect floods, as shown in the charts below.

Glossary of flood terms *(USGS defined)*

Flood: A flood is any relatively high streamflow that overtops the natural or artificial banks of a river.

Discharge: Discharge is another term for streamflow; it is the measured volume of water that moves past a point in the river in a given amount of time. Discharge is usually expressed in cubic feet per second.

Cubic foot per second: One cubic foot per second (cfs) is about 450 gallons per minute. The average discharge of the Columbia River in September at The Dalles, Oregon, is about 120,000 cfs, which would fill the Seattle Kingdome in less than 10 minutes. The average discharge of the Puyallup River in September is about 1,700 cfs at Puyallup, Wash.

Floodplain: The floodplain is the relatively flat lowland that borders a river, usually dry but subject to flooding. Floodplain soils actually are former flood deposits.

The average number of years between floods of a certain size is the recurrence interval or return period. The actual number of years between floods of any given size varies a lot because of the naturally changing climate.

Recurrence interval: The average number of years between floods of a certain size is the recurrence interval or return period. The actual number of years between floods of any given size varies a lot because of the naturally changing climate

Hydrograph: A hydrograph is a graph that shows changes in discharge or river stage over time. The time scale may be in minutes, hours, days, months, years, or decades.

River stage: The river stage is the height of the water in the river, measured relative to an arbitrary fixed point.

What about a 100-year drought?

Undoubtedly, a 100-year flood occurrence can have a significant and lasting impact on every aspect of the local environment. If streamflow statistics define what a 100-year flood is, do you think similar statistics could define the opposite event – a 50- or 100-year drought? Certainly it can. And, although a drought doesn't have the immediate and devastating impact that a flood has, it can still have severe effects on the local environment just as a flood does (only it is drawn out over a longer time period). As an example, read about the severe drought in Maine in 1999-2000, or the Utah drought of 1999-2002.

Changes: Ohio's Flood Insurance Policy Statistics 2008 to 2014

Christopher M. Thoms, CFM, Floodplain Management Program Manager - ODNR, Division of Soil & Water Resources

Throughout the period of debate and enactment of the recent multi-faceted NFIP reforms, a significant concern has been the cost and number of flood insurance policies. These reforms eliminate long-standing subsidies (previously available to certain Pre-FIRM structures) resulting in increases of flood insurance premiums for many structures. New rates are intended to reflect the full flood risk (*i.e.*, actuarially rating) for each structure. Structures that are noncompliant with NFIP minimum criteria are also seeing increases in policy premiums.

All federal flood policies now include an annual surcharge of $25 for primary residence properties and $250 for non-residential properties and non-primary residential properties. These surcharges are to be deposited in the NFIP Reserve Fund, established to ensure funds are available for meeting the expected future obligations of the NFIP. Federal flood insurance is available for purchase for all insurable structures in a NFIP-participating community. There are more than 20,000 such communities across the U.S. with about 4.7 million federal flood insurance policies in force.

OHIO FLOOD INSURANCE STATISTICS							
From 1978 to 20	14	13	12	11	10	09	08
Communities w/ IDed SFHAs:	707	705	705	803	755	755	755
NFIP-participating:	748	747	747	745	742	741	739
Non-participating IDed:	101	101	99	101	91	13	65
Policies in force:	40,115	46,104	46,292	40,412	39,923	40,783	41,386
# claims paid:	25,026	21,461	25,572	17,507	17,350	17,158	871
$ claims paid in millions:	>$299	>$256	>$287	>$239	>$239	>$236	>$10

As of 2014, there were approximately 748 NFIP-participating communities in Ohio with $6,899,164,600 in coverage (compared to $7,655,131,200 a year ago) and with an average policy cost of $899 (compared to $813 a year ago). Though the number of NFIP-participating communities increases each year, that total may vary within the year. Some communities suspended due to their missing regulation-adoption deadlines or incomplete amendments, are likely to rejoin (after addressing their violations and deficiencies) and some, prompted by insurance needs (or that are newly identified) choose to join or rejoin. FEMA provides updated community-specific statistics at: http://bsa.nfipstat.fema.gov/reports/ 1040.htm#39 distinguishing each community's insurance losses as total, closed (paid and unpaid), open, and cumulative dollars paid.

It is often necessary to remind our citizens that the performance standards --including permit application requirements-- specified in our community's flood risk reduction regulations apply to all new and substantially altered SFHA-development, regardless of whether a structure is insured. That being said, it is helpful to be aware of these flood insurance statistics at the federal, state, and local levels. This data can support your efforts to increase flood risk awareness, clarify the monetary costs of the threat, increase compliance, and inform decisions to mitigate or eliminate that threat. For more information please contact our office.

Variously known as the 2012 National Flood Insurance Program (NFIP) Reform Act/ Biggert Waters (BW)-12 enacted on July 6, 2012, and the Homeowners Flood Insurance Affordability Act (HFIAA) / Grimm Water (GW)-14 enacted on March 21, 2014

FEMA typically reports these statistics by November of each year and posts them at fema.gov

Ohio Committee for Severe Weather Awareness Poster Contest

Ethan Kammer, a sixth grader in Scioto County during the 2014-2015 school year, was recognized at the Ohio State Fair as the overall state winner in a statewide poster contest. Ethan's poster on thunder and lightning safety illustrates lightning and rain clouds, with safety tips bordering the poster's message: **Keep Calm and Weather the Storm**. The Ohio Committee for Severe Weather Awareness chose Ethan's poster as the most informative, accurate and creative out of the many posters received during its annual Severe Weather Awareness Poster Contest.

As the overall state winner, Ethan received a variety of awards and prizes from the committee and its partners, to include a check to go toward a $100 U.S. Treasury Direct savings bond, a letter of congratulations from Governor John R. Kasich, a NOAA Weather Radio, a smoke detector, a personalized trophy, a Community Emergency Response Team (CERT) backpack and disaster supply kit, and a host of other prizes. Later in the fall, his school will receive an engraved "traveling" trophy to showcase for the remainder of the school year. In an effort to promote severe weather preparedness, the committee will feature Ethan's

poster throughout the year. Six students, one each from first through sixth grades, were announced as state-level winners and received prizes and awards. This year, a total of 36 students from 21 Ohio counties were honored as regional winners. The students represented grades 1-6 from 22 schools. As regional winners, every student artist received a certificate from the National Weather Service and sling backpacks full of prizes from the offices and their partners that make up the Ohio Committee for Severe Weather Awareness.

Since 1978, the Ohio Committee for Severe Weather Awareness has conducted its annual poster contest. Since its inception, students have designed informative posters on severe weather safety and preparedness. The efforts of these students have helped the committee meet its overall goal – to educate Ohioans about the actions they can take to protect themselves and others before, during and after severe weather occurs.

All posters will be available to view on the Ohio Committee for Severe Weather Awareness Web site: www.weathersafety.ohio.gov.

Severe Weather Awareness for Your Calendar

If you are a preparedness geek, you may notice that the Federal Emergency Management Agency's (FEMA) Ready Campaign and the National Weather Service's (NWS) Weather Preparedness Events Calendars do not include a National Severe Weather Awareness Week or a National Flood Safety Week. The change took effect this year to encourage states and regions to focus on natural hazards that may have a more significant impact locally such as cold weather, tornadoes, and flooding in Ohio verses tsunamis, rip currents, and hurricanes in Hawaii.

Weather Safety Week Events

2015	Ohio's Winter Safety Awareness Week	November 15-21, 2015
2016	Ohio's Spring Severe Weather Awareness Week	March 20-26, 2016
	Statewide Tornado Drill	Wednesday, March 23rd at 9:50 am
	National Lightning Safety Awareness Week	June 19-25, 2016
	Ohio's Winter Safety Awareness Week	November 13-19, 2016

Policies for Buildings Newly Mapped into the SFHA

New Flood Insurance Rate Maps (FIRMs) can show that the risk of flooding has changed. And for some property owners, a change in risk means new flood insurance requirements. In recent years, the Federal Emergency Management Agency (FEMA) has sought to ease the financial impact of a map change by extending eligibility for a lower-cost Preferred Risk Policy (PRP) if a building outside of the high-risk area called a Special Flood Hazard Area (SFHA) is newly mapped into the SFHA.

Until now, the PRP Eligibility Extension has applied to any building newly mapped into an SFHA since October 1, 2008, although as of October 1, 2013, PRP Eligibility Extension premiums began increasing at a higher rate on renewal. But beginning April 1, 2015, FEMA is implementing a new procedure to meet requirements of the Homeowner Flood Insurance Affordability Act of 2014 (HFIAA).

Following a map revision, the owner of a building, newly mapped into an SFHA, will be rated according to a new procedure for newly mapped properties. This rate will be equal to the PRP rate, but with a higher Reserve Fund Assessment and Federal Policy Fee, for the first 12 months following the map revision. After the introductory year, the rate will begin its transition to a full-risk rate with annual rate increases of no more than 18 percent each year. Here's how it will work:

Scenario	Property Owner Eligibility
Property newly mapped into an SFHA on or after April 1, 2015	Eligible for the Newly Mapped procedure if the policy becomes effective within 12 months of the map revision date
Property newly mapped into an SFHA on or after April 1, 2015, but not covered within 12 months of the map revision date	Property no longer eligible for Newly Mapped procedure. Post-FIRM buildings are eligible for grandfather rating. Pre-FIRM buildings must be rated using the new maps, and may be eligible for pre-FIRM subsidized rates.
Property newly mapped into an SFHA between October 1, 2008, and March 31, 2015, but not currently covered	Eligible for the Newly Mapped procedure if covered before April 1, 2016
Property with policy validly issued under the PRP Eligibility Extension prior to April 1, 2015	Renewed using the Newly Mapped procedure on the first effective date on or after April 1, 2015; policies for these buildings will receive the same premium as those newly issued using the Newly Mapped procedure

*Note that a new, Congressionally-mandated, annual HFIAA Surcharge ($25 for primary homes; $250 for all other buildings) will need to be applied to the final premium. This surcharge could increase the total out-of-pocket expense for the 2015 policy year by more than 18 percent over the previous year's premium for some policyholders who had coverage prior to April 1, 2015.

Property owners who do not have flood insurance and find that their buildings are being newly mapped into an SFHA should be encouraged to purchase a PRP before the new FIRMs become effective. Not only is their risk higher than they thought (and any potential flooding will not wait until the new maps become effective), but they also will be able to renew their policies at lower-cost PRP rates during the first 12 months after the new map becomes effective. In other words, they will gain almost an extra year at PRP rates.

Note that the same eligibility requirements that apply for PRPs also apply for the Newly Mapped procedure. A property that falls outside this category might be eligible for the Standard X Zone rating.

2015 Ohio Statewide Floodplain Management Conference Recap

Alicia Silverio, CFM, Senior Environmental Specialist, Floodplain Management Program - ODNR, Division of Soil & Water Resources

The 2015 Ohio Statewide Floodplain Management Conference (OSFMC) themed *"Advocating for Floodplain Management"* was held on August 26-27, 2015 at the Doubletree Hotel in Worthington Ohio. This year, over 180 public and private sector professionals convened to learn about the most current issues in floodplain management. The Conference offered three tracks of concurrent sessions in addition to the Floodplain Manager Bootcamp, the Certified Floodplain Manager (CFM) Exam and study session, Mock Disaster, and Networking Events. The Keynote Address was delivered by David Stearrett, Flood Insurance Advocate and lead within the Federal Emergency Management Agency's (FEMA) newly created Office of the Flood Insurance Advocate. His remarks apprised attendees of development of the Advocate's Office, changes to the National Flood Insurance Program (NFIP) and FEMA's priorities.

Association of State Floodplain Managers (ASFPM) Executive Director , Chad Berginnis, also provided an update on the Association's activities, Executive Order 13690, and the Homeowner's Flood Insurance Affordability Act (HFIAA). Sessions covered a range of topics including floodplain mapping/RiskMAP, mitigation,

David Stearrett, Flood Insurance Advocate, during his Keynote Address at the 2015 Ohio Statewide Floodplain Management Conference

flood insurance, case studies, regulations, *etc...*

Credits/hours were awarded toward maintaining Certified Floodplain Manager (CFM), Board of Building Standard (BBS), and Professional Engineering (PE) accreditations and licensures

The OSFMC is a cooperative effort among the Federal Emergency Management Agency, ODNR, and OFMA.

Ohio Floodplain Management Association (OFMA)

In 2015, OFMA celebrated 20 years or reducing flood risk at the annual Ohio Statewide Floodplain Management Conference. During the General Membership Meeting, Shawn Arden gave the President's Report where he reviewed OFMA's year:

Priorities – OFMA continues to build upon its past activities. The Board reviewed five-year and one-year priorities arranged under the key elements of Education, Cooperation, Implementation and Organization.

Accomplishments – In 2015, OFMA's activities included educating and reaching out to key stakeholders and improving the organization's partnership with the Water Management Association of Ohio (WMAO) and The Association of State Floodplain Managers (ASFPM).

- OFMA also developed a stakeholder list and completed outreach to Ohio's newly elected House/Senate representatives.
- Training for disaster recovery and NFIP compliance support is being promoted through the Mock Disaster activity. It was conducted as part of the annual conference and can be deployed across the state to build local flood response and recovery capabilities.
- Update exhibit booth materials to showcase the relationship with WMAO and promote OFMA's mission.
- The Certified Floodplain Manager refresher course and exam have been delivered multiple times throughout Ohio. This activity promotes professional development and ensures continuing education is available to Ohio floodplain managers.

Tasks In-Progress – Activities to be the focus for next year.

- Website enhancement , integrating more technology (i.e. video conferencing and electronic surveys) and promoting a common location for sharing floodplain management information.
- Incorporating a research track at future conferences to help increase awareness for innovative and new approaches to manage floodplain resources, reduce flood risk and build more resilient communities.
- Improve interest/participation in the OFMA Conference Scholarship and Awards activities. Currently, scholarships go unused each year and nomination of peers from membership is rare.
- Membership surveys to obtain input and feedback on priorities and issues that Board should address are desired. This will be piloted with an electronic survey following this year's annual conference.

Additionally, three incumbent Members-at-Large: Mike Mihalisin, Jerry Brems and Matt Whitehead were re-elected to another term on the OFMA Executive Board..

Executive Order 13690

Alicia Silverio, CFM, Senior Environmental Specialist, Floodplain Management Program - ODNR, Division of Soil & Water Resources

Executive Order 13690 establishes Federal Flood Risk Management Standard (FFRMS) to protect federally funded projects from the effects of extreme weather and climate change.

The FFRMS is intended to reduce the risk and cost of future flood disasters by requiring all Federal projects (*i.e.,* buildings, roads and other infrastructure) in and affecting floodplains to meet higher flood risk standards, so as to better withstand the impacts of flooding.

The FFRMS gives agencies the flexibility to select one of three approaches for establishing the flood elevation and hazard area they use in siting, design, and construction. They can:

- Use data and methods informed by best-available, actionable climate science;
- Build two feet above the 100-year (1%-annual-chance) flood elevation for standard projects, and three feet above for critical buildings like hospitals and evacuation centers; or
- Build to the 500-year (0.2%-annual-chance) flood elevation.

This new flood standard will apply when Federal funds are used to build, or significantly retrofit or repair, structures and facilities in and around floodplains to ensure that those structures are resilient, safer, and long-lasting.

The FFRMS DOES NOT affect

- Minimum floodplain management criteria in 44CFR Part 60 that communities must adopt to participate in the National Flood Insurance Program (NFIP)
- Flood mapping standards
- Rating and claims practices of the NFIP (*i.e.* the cost or availability of Federal flood insurance for policyholders)
- A flood insurance policy's Increase Cost of Compliance (ICC) coverage

For more information about the FFRMS, visit http://www.fema.gov/federal-flood-risk-management-standard-ffrms

As-Built Elevation Certificates (Not Proposed)

Jarrod Hittle, CFM, Emergency Action Plan Specialist, Dam Safety Program - ODNR, Division of Soil & Water Resources

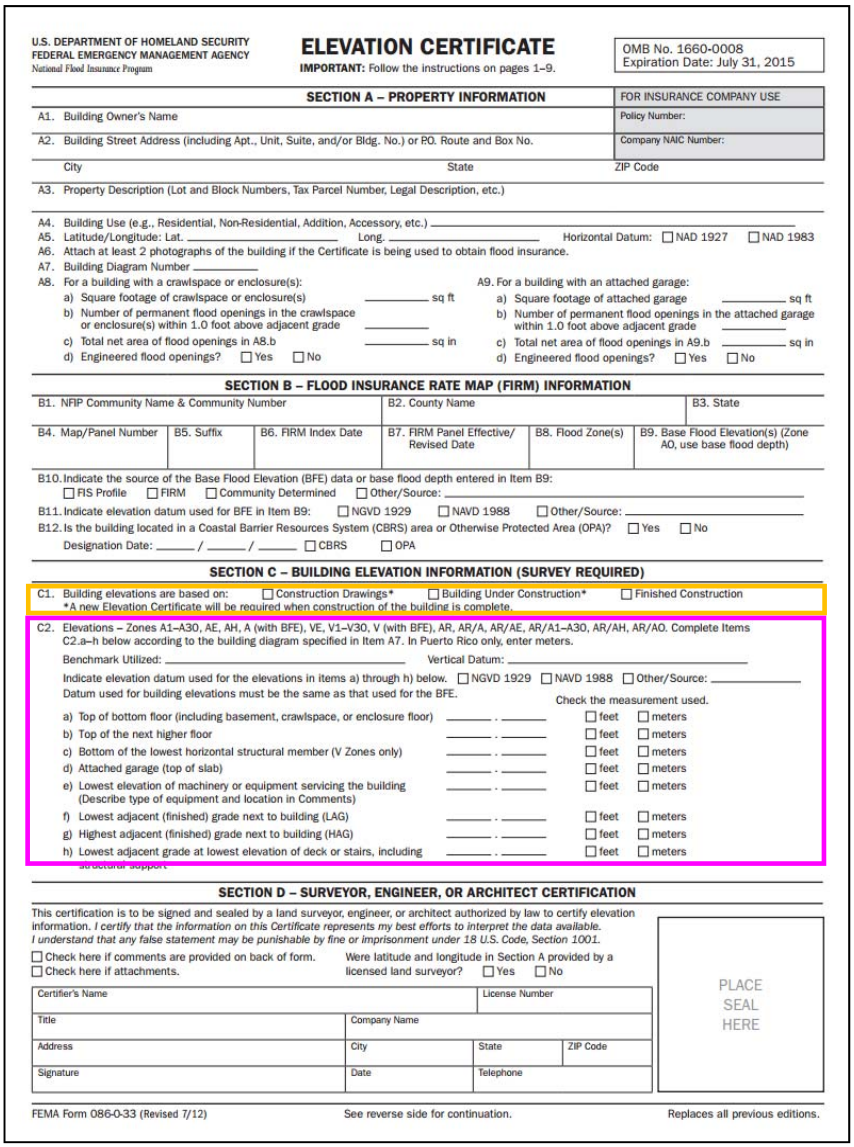
A major function of our role here at the state is conducting Community Assistance Visits (CAVs). I'm sure by now; most of you reading this have participated in a CAV and are aware of what this entails. For those of you that have not or are new to your position, a CAV is a comprehensive assessment of your community's floodplain management program. We review your permits, regulations, file documentation, etc. to ensure that your program is meeting the requirements under the National Flood Insurance Program. Much of what we look for during a CAV is structure compliance and the number one thing we look for in structure compliance is an elevation certificate (EC).

When completing an EC, the surveyor, engineer, or architect is required to indicate whether the elevations are based on construction drawings, a building under construction, or finished construction.

Some of the EC's that we come across are based upon construction drawings or a building under construction. It is even noted on the EC that "a new Elevation Certificate will be required when construction of the building is complete" (above). These ECs are not acceptable to demonstrate compliance. Although, the elevations may be spot on from the construction drawings to the as-built, it is important that the permit file have a certified, finished construction EC. If this error is discovered during a CAV, we will request that you obtain the finished construction EC to correct/complete your permit for that particular structure.

The EC is an excellent tool for floodplain administrators to monitor compliance for structures that are built within their jurisdictions. For example, you may require an EC once the foundation is complete. This will ensure that the low floor will meet the community's minimum requirements, before construction is complete and it becomes more costly to go back and correct an issue. With a building under construction, the surveyor, engineer, or architect would include only elevations that can be surveyed in Item C2 a-h (below).

Then, use the comments area in Section D to provide elevations obtained from construction plans or drawings. This may include elevation of machinery, lowest/highest adjacent finished grade, or a garage floor slab that may not be poured yet. Only select finished construction when all machinery and/or equipment, such as furnaces, hot water tanks, heatpumps, air conditioners, and elevators and their associated equipment have been installed and the grading around the building is complete.



U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
National Flood Insurance Program

ELEVATION CERTIFICATE
IMPORTANT: Follow the instructions on pages 1–9.

OMB No. 1660-0008
Expiration Date: July 31, 2015

SECTION A – PROPERTY INFORMATION | FOR INSURANCE COMPANY USE

A1. Building Owner's Name | Policy Number:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. | Company NAIC Number:
City State ZIP Code
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)
A5. Latitude/Longitude: Lat. Long. Horizontal Datum: ☐ NAD 1927 ☐ NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.
A7. Building Diagram Number
A8. For a building with a crawlspace or enclosure(s):
a) Square footage of crawlspace or enclosure(s) sq ft
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade
c) Total net area of flood openings in A8.b sq in
d) Engineered flood openings? ☐ Yes ☐ No
A9. For a building with an attached garage:
a) Square footage of attached garage sq ft
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade
c) Total net area of flood openings in A9.b sq in
d) Engineered flood openings? ☐ Yes ☐ No

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number | B2. County Name | B3. State
B4. Map/Panel Number | B5. Suffix | B6. FIRM Index Date | B7. FIRM Panel Effective/ Revised Date | B8. Flood Zone(s) | B9. Base Flood Elevation(s) (Zone AO, use base flood depth)
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: ☐ FIS Profile ☐ FIRM ☐ Community Determined ☐ Other/Source:
B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source:
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☐ No
Designation Date: / / ☐ CBRS ☐ OPA

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☐ Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO. Complete Items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.
Benchmark Utilized: Vertical Datum:
Indicate elevation datum used for the elevations in items a) through h) below. ☐ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source:
Datum used for building elevations must be the same as that used for the BFE.

	Check the measurement used.
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	☐ feet ☐ meters
b) Top of the next higher floor	☐ feet ☐ meters
c) Bottom of the lowest horizontal structural member (V Zones only)	☐ feet ☐ meters
d) Attached garage (top of slab)	☐ feet ☐ meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	☐ feet ☐ meters
f) Lowest adjacent (finished) grade next to building (LAG)	☐ feet ☐ meters
g) Highest adjacent (finished) grade next to building (HAG)	☐ feet ☐ meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	☐ feet ☐ meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. *I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.*

☐ Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor? ☐ Yes ☐ No
☐ Check here if attachments.

Certifier's Name | License Number
Title | Company Name
Address | City | State | ZIP Code
Signature | Date | Telephone

PLACE SEAL HERE

FEMA Form 086-0-33 (Revised 7/12) See reverse side for continuation. Replaces all previous editions.

Farewell

Jarrod Hittle, CFM, Dam Safety Emergency Action Plan Specialist - ODNR, Division of Soil & Water Resources

It is with mixed emotions that I announce that I have left the floodplain management program. But, I haven't gone far; I have taken a position with ODNR's Dam Safety Program just down the stairs from my old office. I am excited for this new opportunity and look forward to the challenges that it will bring. So this is not really good bye, it's more like, "I'll see you around".

The two plus years that I have been with floodplains have been challenging and very rewarding. Being able to see firsthand the commitment and dedication of the floodplain management professionals here in Ohio is impressive. The one thing that I enjoyed most about this job was building relationships with the people working in the communities that I visited. I can honestly say that I learned more from my visits/conversations with local floodplain managers than I did at any conference or training.

While sound floodplain management makes sense to us, it often falls on deaf ears for many citizens in your communities. Educating your citizens, and more importantly your elected officials, is an critical tool in a floodplain manager's toolbox. Some of the most successful floodplain programs across the state have all had one thing in common… community support.

Jarrod Hittle, CFM, *former* Environmental Specialist - ODNR's Floodplain Management Program

So I would encourage you to use the resources made available to you, not only to increase your knowledge, but the knowledge of those in your community. Christopher and the rest of the floodplain management staff (in my opinion) are your best resource and will not hesitate to assist in any way possible. I am proud to say, that I have been a part of such a hardworking and dedicated group.

Thank you for all that you do and it has been a pleasure working with so many talented people.

Training Opportunities

Event	Organization	Date	Location	Contact
CFM Exam	Ohio Floodplain Management Association (OFMA)	October 22, 2015 9am - Noon	138 East Court Street, 8th Floor, Conference Room 806, Cincinnati, OH 45202	www.floods.org
CFM Exam	OFMA	December 10, 2015 12:30 - 3:30pm	2045 Morse Road, B-3 Conference Room, Columbus, OH 43229	www.floods.org
Conference	Water Management Association of Ohio (WMAO)	November 17-18, 2015	Doubletree – Worthington/Columbus, 175 Hutchinson Ave, Columbus, OH 43235	www.wmao.org
Conference	Association of State Floodplain Managers (ASFPM)	June 19-24, 2016	DeVos Place Convention Center 303 Monroe Ave. N.W. Grand Rapids, MI 49503	www.floods.org
CFM Refresher Course	OFMA, ODNR	August 23, 2015	2045 Morse Road, B-3 Conference Room, Columbus, OH 43229	www.ofma.org
Conference	OFMA, ODNR, FEMA	August 24-25, 2016	Doubletree – Worthington/Columbus, 175 Hutchinson Ave, Columbus, OH 43235	www.ofma.org

Additional training (including CFM Exams, Refresher Courses, floodplain management workshops) will be updated to www.ofma.org as available.

The Antediluvian

Ohio's Floodplain Management Newsletter

Division of Soil & Water Resources

2045 Morse Road, B-2

Columbus, Ohio 43229

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

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