



The Antediluvian

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

A Production of the Ohio Department of Natural Resources, Division of Water

Volume I

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MISSION STATEMENT: The Mission of Floodplain Management Program is to provide leadership to local governments, state agencies, and interested parties toward cooperative management of Ohio's floodplains to support the reduction of flood damage and the recognition of the floodplain's natural benefit. This mission will be accomplished through technical assistance, public awareness, education, and development/protection standards.

We are happy to introduce ourselves to you and look forward to meeting and working with each of you.



The Division of Water staff working with the Floodplain Management Program include: (from left to right, back row) Dena Cox-Planner, Cindy Crecelius-Planner Supervisor, Michael Gease-Senior Planner, Mary Klemas-Planner, Ella Hardman-Secretary, (front Row) Christopher Thoms-Planner, Peter Finke-Administrator, Andrew Reimann-Planner, and Chad Berginnis-College Intern.

Welcome ...

by Cynthia Crecelius

In our travels throughout the state, we have heard your requests for a newsletter. The need for a regular communication link between your local floodplain management officials and our office as the State Coordinator for the National Flood Insurance Program is recognized. We have taken a cue from the "Great Flood of 1993" and are introducing, *The Antediluvian*. Our "after the flood" newsletter is directed toward those of you involved with regulating, managing, identifying and insuring structures located in Ohio's floodplain areas.

In future issues of *The Antediluvian* we will be sharing with you our mission of leadership toward

increasing cooperative management between public, private, local, state and federal interests to reduce future flood damage and protect the floodplain's natural benefits.

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Our Floodplain Management Program emphasis will broaden to include: a variety of technical / planning assistance, education and training opportunities, hazard mitigation strategies, implementation of State Flood Damage Reduction legislation, and continued coordination of the National Flood Insurance Program. The efforts of the Division of Water staff will be focused on promoting effective local and state agency floodplain management programs.

We encourage your comments and suggestions concerning what is most needed to make your floodplain management program effective.

Please direct your comments to any of the staff identified.

Peter Finke provides program policy and direction from 25 years of service in the area of floodplain management.

Cindy Crecelius and **Mike Gease** provide a tenured balance to the recently expanded planning staff of **Christopher Thoms**, **Dena Cox**, **Mary Klemas** and **Andrew Reimann**.

The planning staff is responsible for most aspects of community assistance provided.

Chad Berginnis is responsible for responding to the majority of requests for flood hazard information. The friendly and efficient response obtained by calling (614) 265-6750 is credited to **Ella Hardman**, our secretary. 

Floodplain Workshops

by Dena Cox

The Division of Water periodically conducts floodplain management workshops for local officials at various locations throughout the state. The purpose of these workshops is to provide a learning

opportunity to those community staff members who are responsible for enforcing local flood damage prevention codes and ensuring their community's compliance with the National Flood Insurance Program (NFIP).

In addition to providing an overview of floodplain management and its benefits, DNR staff will explain the requirements of and reasons for participating in the NFIP.

In a hands-on application, participants will break into small groups in order to work through an example of issuing a permit for a proposed structure in a special flood hazard zone.

Each of these groups will be assisted by one of the workshop presenters.

To find out when the next workshop will be in your area, please call (614)-265-6750. 

Did You Know?

Local Ordinances May Need To Be Updated

by Michael Gease

Effective October 1, 1986, FEMA required all participating NFIP communities to adopt revised floodplain management regulations.

Communities that fail to maintain compliant regulations may be subject to suspension from the NFIP by FEMA, which results in loss of flood insurance, flood disaster assistance, and impacts other federal and state programs. You may wish to check the date that your current regulations were adopted. If they predate October 1, 1986, please contact our office at (614) 265-6750.

We will be happy to review your regulations to determine if they are compliant. 

FLOOD AND TORNADO SAFETY AWARENESS WEEK

MARCH 13-19, 1994

by Peter G. Finke

To help increase awareness about the threat of flooding and tornadoes in Ohio, Governor Voinovich has designated March 13-19, 1994 as Flood and Tornado Safety Awareness Week. In his proclamation the Governor urges the news media and local governments to assist the Ohio Committee for Severe Weather Awareness in its efforts to educate Ohioans about the dangers of floods and tornadoes and necessary measures that can be taken to increase safety.

Ohio has a long history of damaging floods. No area in the state is free from the threat of flood producing storms. Floods account for almost 80 percent of Ohio's major disaster declarations. Just a few weeks ago, after the recent January flooding, ice flows and severe storms, the Governor sent a request to President Clinton that 20 Ohio counties be declared major disaster areas.

Descriptions of flood events dating back to the late 1700s exist for the Great Miami and Ohio rivers. However, Ohio's largest and deadliest flood in March 1913. That flood, which affected virtually the entire state, destroyed or damaged some 61,000 homes as well as hundreds of bridges, and left thousands of people homeless. Damage was estimated at almost \$150 million. It is estimated that a repeat of such a widespread flood today would result in several billion dollars' worth of damage. Since the great flood of 1913, Ohio experienced a number of other major damaging floods. Perhaps most well known is the January 1959 flood in which some 20,000 homes were destroyed or damaged.

Both the above floods are examples of major stream flooding resulting from the movement of large air masses called frontal systems possessing contrasting temperature and moisture conditions. When such frontal systems clash, precipitation can fall over thousands of square miles. Flooding from such frontal systems is generally more prevalent during the winter and early spring season when contrast between air masses is most pronounced.

Thunderstorms are another type of flood producing storm. Such storms are most frequently associated with warm weather conditions. Although rainfall from thunderstorms generally affects much smaller areas, such rainfall can be extremely intense, resulting in flash flooding. An extreme example of such a flash flood occurred on June 14, 1990 near the town of Shadyside (Belmont County). Twenty six people perished when some 3.5 inches of rain fell within a one-half hour period over two small watersheds.

It should come as no surprise that the Federal Emergency Management Agency, which administers federal disaster relief efforts, ranks Ohio number 11 in the United States in terms of properties at risk from flooding. Although local, state and the federal government agencies have spent billions of dollars on flood control projects, flood losses continue to increase in Ohio and nationwide.

In an effort to stop this trend of rising flood damage, more effective flood damage reduction policies are being considered at all levels of government. Increasing public awareness through which almost 500 people perished occurred in media campaigns such as the Flood and Tornado Safety Awareness Week are important components in an overall approach to flood damage reduction. The Ohio Committee for Severe Weather Awareness assists such education efforts by providing information on floods and tornadoes to the media. 

How to Obtain a Flood Map for Your Area



by Chad Berginnis

Prospective homeowners want to know if the property they are about to purchase is located within a floodplain. An appraiser, with a closing looming near, wishes to know what flood zone a home is in. The mayor finds that the community is out of *Flood Insurance Rate Maps* (FIRMs). Who do they call?

The Federal Emergency Management Agency (FEMA), which administers the National Flood Insurance Program, has issued flood maps for over 700 communities including all 88 counties. With an inventory of over 3,000 map panels, the state of Ohio has many flood-prone areas.

The first step in obtaining flood zone information is correctly identifying the exact location of the property in question. This includes:

1. Determination if the property is in an incorporated community or an unincorporated county area.
2. Using a plat map, highway map or topographic map locate the nearest intersection to the property, get the bearings (*i.e.*, NE, SW) relative to the intersection and, using the scale on the map, mark the property boundaries.

FIRMs can be obtained from two primary sources. The first, FEMA's Flood Map Distribution Center, is the official map distributor for the country. All entities except federal, state and local governments will be assessed a nominal charge for the maps. To order a particular map panel, one must provide the Community Identification Number and the Panel Number. For example, Panel 20 of Columbus'

FIRM is 390170 0020 B. For larger map sets in which a single panel is needed, we recommend ordering the map index from which the appropriate map panel can be determined.

The second source of FIRMs is the appropriate municipal or county government. FEMA requires that communities make these maps available for public viewing. Additionally, some communities will actually assist callers in determining whether a structure is located within an identified special flood hazard area.

Other sources of information include the Ohio Department of Natural Resources, Division of Water and private map locating services.

FEMA Flood Map Distribution Center
6930 (A-F) San Tomas Road
Baltimore, MD 21227-6227
or call toll free (800) 358-9616



Biennial Reports are Coming

by Chad Berginnis

We expect that the *Biennial Report Forms* will be sent to each community in early 1994. This report is sent by the FEMA to participating and identified communities in the National Flood Insurance Program. The document is very important to our office as it allows us to quickly evaluate and address any problems pertaining to a community's floodplain management program and is used as a primary source of current floodplain administrators. Fielding nearly 2,700 information requests annually, we are challenged to provide the most accurate data available. So please, when filling out the *Biennial Report Form*, indicate who is administering the local floodplain regulations.

If you are unsure of your Floodplain Administrator, this provides an excellent opportunity to review your *Flood Damage Prevention Regulations* which will identify who should be administering your program. Finally, please print your name below your signature so we can update our files!





WEIGHING the COSTS

by James R. Morris, P.E.

Building in flood hazard areas creates risk. Flood risk is a structure's exposure to potential damage resulting from a flood event and that event's probability of occurrence. It is difficult to explain to homeowners and builders the concepts and probabilities involved in balancing the design life, economic considerations and the relatively rare flooding events.

For example: If a project has a fifty-year design life and is to be protected against the 100-year flood, using the table below, the probability that the 100-year flood will occur or be exceeded within that fifty-year period is determined to be approximately 40%. If the structure is protected against the 100-year flood, the probability of that flood occurring becomes 10% within the fifty-year design period. By applying this calculated risk probability of 40% over the design life, if a structure which would sustain \$10,000 worth of flood damage, the 100-year probable loss is 40% of \$10,000 or \$4,000.

At the 100-year flood level the probable loss is 10% of \$10,000 or \$1,000. If the structure can be protected to the 100-year flood level for less than the difference in damages (\$4,000 - \$1,000 = \$3,000) then it is cost effective to spend the extra amount on this protection.

Analyzing the risk of damage versus the cost of floodproofing illustrates the benefit of flood protection.

{The above is an extract from the paper, *Some Considerations on Design Criteria for Hydrologic Extremes* by James R. Morris}

Return Periods in Years for Various Combinations of Design Lives and Probability of Occurrence

Design Life (in years)	Percent Probability That Event Will Be Equalled or Exceeded in the Design Life of the Structure.							
	50%	40%	30%	20%	15%	10%	5%	15%
10	15	20	29	45	62	95	195	995
20	29	37	57	90	123	190	390	*
30	44	59	85	135	185	285	585	*
40	58	79	113	180	246	380	781	*
50	73	98	141	225	308	475	976	*
60	87	118	169	269	370	570	*	*
70	101	137	197	314	431	665	*	*
80	116	157	225	359	493	760	*	*
90	130	177	252	404	554	855	*	*
100	145	196	281	449	616	950	*	*

{Note: All values on this table are expressed in years unless otherwise labeled}

* Return Period Exceeds 1000 years

Use of Elevation Certificates



by H. Joseph Coughlin Jr.

This policy paper considers the use of *Elevation Certificates* by lenders and others to exempt structures from the requirements of the National Flood Insurance Program (NFIP) and the *Flood Disaster Protection Act of 1973*.

The Act requires that buildings located in Special Flood Hazard Areas (SFHA) be covered by flood insurance under certain conditions. This means any building or portion of it, including its foundation/support system that is located in the SFHA. The elevation of the building does not affect this requirement. The fact that the building sits slab on grade or is elevated above the ground to the Base Flood Elevation or a higher elevation has no impact on the requirements to purchase flood insurance. **The determining factor as to whether or not a building is located in a SFHA is the elevation of the land and not the building on which the land is located.**

The use of the *Elevation Certificate* in the NFIP is primarily for the purpose of determining the elevation of the lowest floor on any new construction or substantially improved buildings relative to the Base Flood Elevation (BFE) on the FEMA *Flood Insurance Rate Map* for the relationship directly affects the flood insurance rate that is charged that property.

An *Elevation Certificate* cannot be used to remove a structure from the SFHA, nor can it be used to remove the mandatory flood insurance purchase requirement.

If a property owner believes that his land is located at an elevation above the BPE on the map and therefore outside the SFHA, even though it is shown on the *Flood Insurance Rate Map* as being

located inside the SFHA, he or she must apply to FEMA for a *Letter of Map Amendment (LOMA)* or *Letter of Map Revision (LOMR)* if he or she wishes to be officially removed from the SFHA. It is only through obtaining one of these two letters from FEMA that a parcel of land can be removed from the designation of being located in the SFHA.

Any individual who completes an *Elevation Certificate*, and then advises their client or others that evidence of the lowest floor of that building being at or above the BFE on the *Flood Insurance Rate Map* is sufficient to allow the lender to waive the requirement for mortgagor to obtain or maintain flood insurance, is providing incorrect advice and could be exposing himself/herself and the client to unnecessary potential liability.

{The above is a letter written by H. Joseph Coughlin Jr., Federal Emergency Management Agency.}

Myths & Facts About The NFIP



Who needs flood insurance? Everyone. And everyone in a participating community of the NFIP can buy flood insurance. Over 18,000 communities across the country have joined the program. In some instances, people have been told that they cannot buy flood insurance because of where they live. To clear up this and other misconceptions about federal flood insurance, the NFIP has compiled this list of common myths about the program, and the real facts behind them, to give you the full story about this valuable protection.

Myth: You can't buy flood insurance if you are located in a high risk flood area.

Fact: You can buy federal flood insurance no matter where you live if your community belongs to the NFIP. The program was created in 1968 to provide

flood insurance to people who live in areas with the greatest risk of flooding, called Special Flood Hazard Areas (SFHAs). In fact, under the Flood Disaster Protection Act of 1973, lenders must require borrowers whose property is located within an SFHA to purchase flood insurance as a condition of receiving a federally backed mortgage loan. Lenders should notify borrowers that their property is located in a SFHA and that affordable federal flood insurance is available.

Myth: You can't buy flood insurance immediately before or during a flood.

Fact: You can purchase flood coverage at any time. There is a five day waiting period after you've applied and paid the premium before the policy is effective. But, if the title of a property is transferred, there's no waiting period -- the policy goes into effect the day you apply and pay the premium.

The policy does not cover a "loss in progress", (NFIP) as a loss occurring as of 12:01 a.m. on the and first day of the policy term. In addition, it is not possible to increase the amount of insurance coverage you have during a loss in progress.

Myth: Flood insurance is available only for homeowners.

Fact: Flood insurance is available to protect homes, condominiums, apartments, and commercial structures. A maximum of \$185,000 of building coverage is available for single family residential buildings, \$250,000 for multi-family residences. The limit for contents coverage on all residential buildings is \$60,000.

Commercial structures can be insured to a limit of \$200,000 for the buildings and \$200,000 for the contents. Commercial coverage is also available for small businesses, with limits of \$250,000 for the building and \$300,000 for contents. In communities in which a detailed flood map has not yet been produced, the maximum coverages are lower.

Myth: You can't buy flood insurance if your property has been flooded.

Fact: It doesn't matter how many times your home, apartment, or business has flooded. You are still eligible to purchase flood insurance, provided that your community is participating in the NFIP.

Myth: Only residents of high risk flood zones need to insure their property.

Fact: Even if you live in an area which is not floodprone, it's advisable to have flood insurance. One-third of the NFIP's claims come from outside high risk flood areas. The NFIP's preferred risk policy, available for as little as \$75 a year, is designed for residential properties located in low-to-moderate risk zones.

Myth: Federal flood insurance can only be purchased through the NFIP directly.

Fact: Federal flood insurance is sold and serviced defined by the National Flood Insurance Program directly through the NFIP, or through a Write Your Own (WYO) company. WYO companies write service policies on a nonrisk bearing basis through a special arrangement with the Federal Insurance Administration.

Myth: Homeowners insurance policies cover flooding.

Fact: Unfortunately, many homeowners do not find out until it is too late that their homeowners' policies do not cover flooding. Federal flood insurance protects your most valuable assets --your home and belongings.

{The above was reprinted from *Flood News for Michigan Floodplain Managers*, Fall 1993} 

For answers to Flood Insurance questions call

1-800-638-6620

The Antediluvian is produced by the Division of Water, Christopher M. Thoms, Editor.

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For more information or assistance with Ohio's floodplain maps and regulations call (614) 265-6750 or visit our offices.



Have You Moved?

We are glad that you received a copy of *The Antediluvian*. If you know of someone who would want to receive a copy but didn't, please send the names with addresses to our office.

If your copy of the newsletter was misdirected, please send us address corrections, office or personnel changes to our offices at 1939 Fountain Square Bldg E-3 Columbus, Ohio 43224



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