

Floodplain IAFSM 2011



**Tuesday October 11, 2011
Floodplain Management Workshop
Wheaton, IL**

Illinois? Floods?



- The largest inland system of rivers, lakes, and streams in the entire nation!



**FLOOD
PLAINS**

1993 – Midwest Floods





2008 – Midwest Floods

FEMA Region V's Largest Flood Event?

The Election Year Flood of 2011

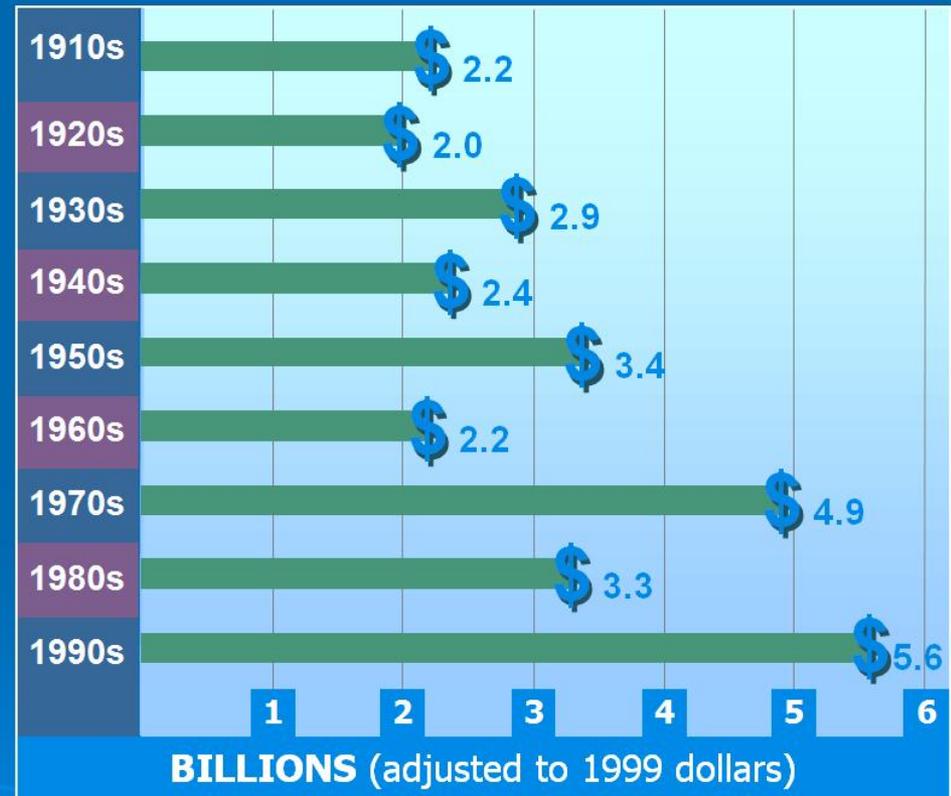


**\$320 Million in individual
assistance**

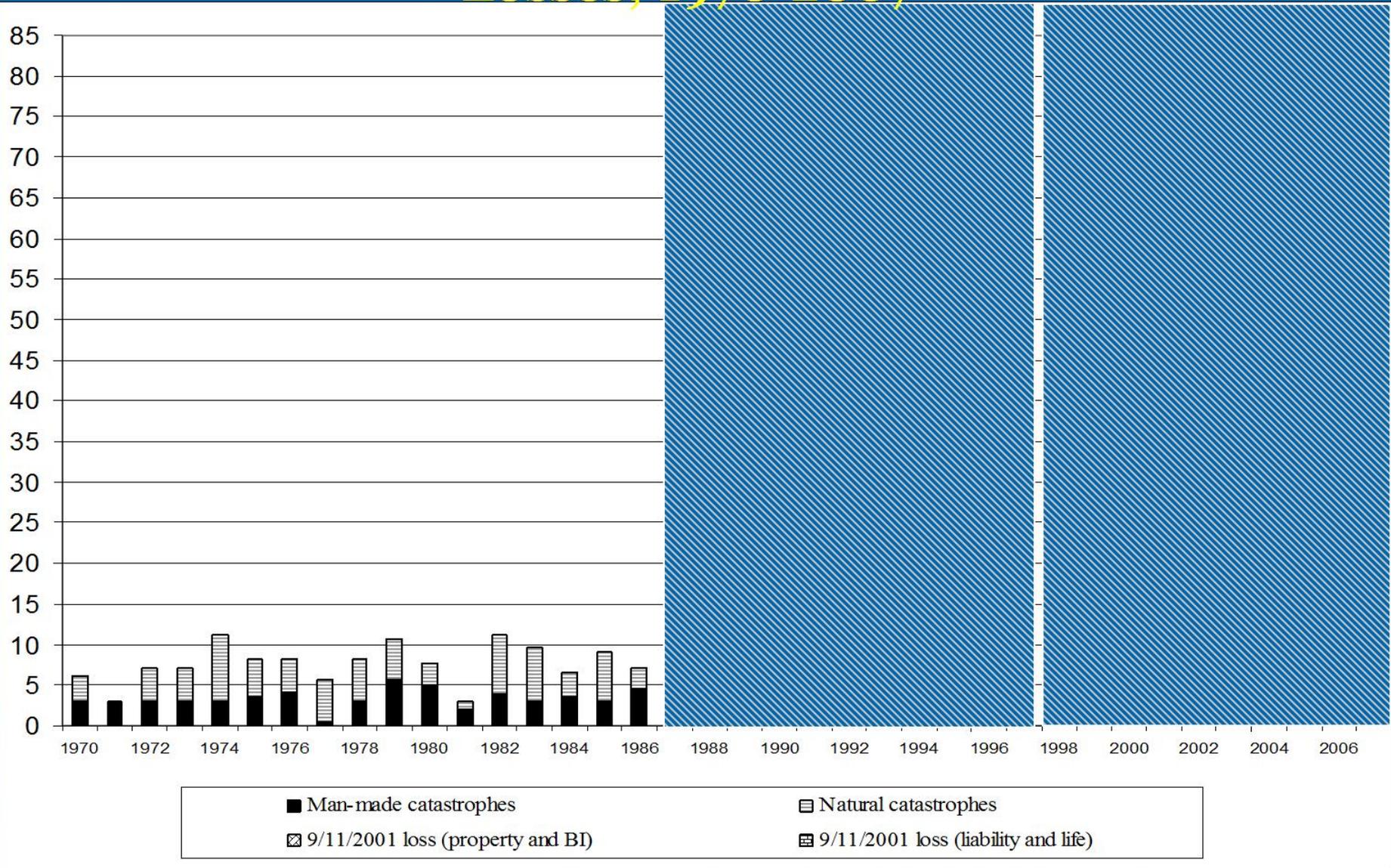
Trends in Flood Damages

- \$10 billion annually
- Four-fold increase from early 1900s
- USGS report:
 - * Extreme weather events have not increased.
 - * Damages have increased.

Society is to blame.....
not the weather!



Worldwide Evolution of Catastrophe Insured Losses, 1970-2007



(Property and business interruption (BI); in U.S.\$ billion indexed to 2007)

Sources: Wharton Risk Center (2008) - data from Swiss Re and Insurance Information Institute

People and Property Are at Risk in the Floodplain

Many Floodplain Residents Don't Understand the Risk



Many Structures Unnecessarily Located in Floodplain

Engineered Structures Have Provided Protection to Millions



**But flood control
is not always the
answer.**

A photograph of a real estate sign in a wooded area. The sign is white with red and black text. In the background, there is a large tree with thick branches and a building under construction with several concrete pillars. The ground is sandy and there are some fallen branches in the foreground.

FOR SALE

**200' OCEAN FRONTAGE
+ 100' BAYOU FRONTAGE**

1 3/4 MILLION FIRM

231.798.3065

**What's wrong with
these pictures?**



Flood Amnesia



Panic

The Hydro **ILLOGICAL** Cycle



Flooding



Devastation



Concern



**Recovery &
Reconstruction**



National Flood Insurance Program



**NFIP
COUNTIES**

To join the National Flood Insurance Program (NFIP), a community must adopt local floodplain management regulations.

In Illinois:
85 of 102 Counties have joined the NFIP. 820 communities have also joined the NFIP.

The Two Edged Sword

➤ **Regulations:**

The most under rated form of mitigation! Hard to quantify.

➤ **Mitigation:**

\$4 saved for every \$1 spent. Easy to quantify.



Floodplain Basics



Understanding the Floodplain



The floodplain is the land that is subject to a 1% or greater chance of flooding in any given year.

Understanding the Floodplain

Base Flood

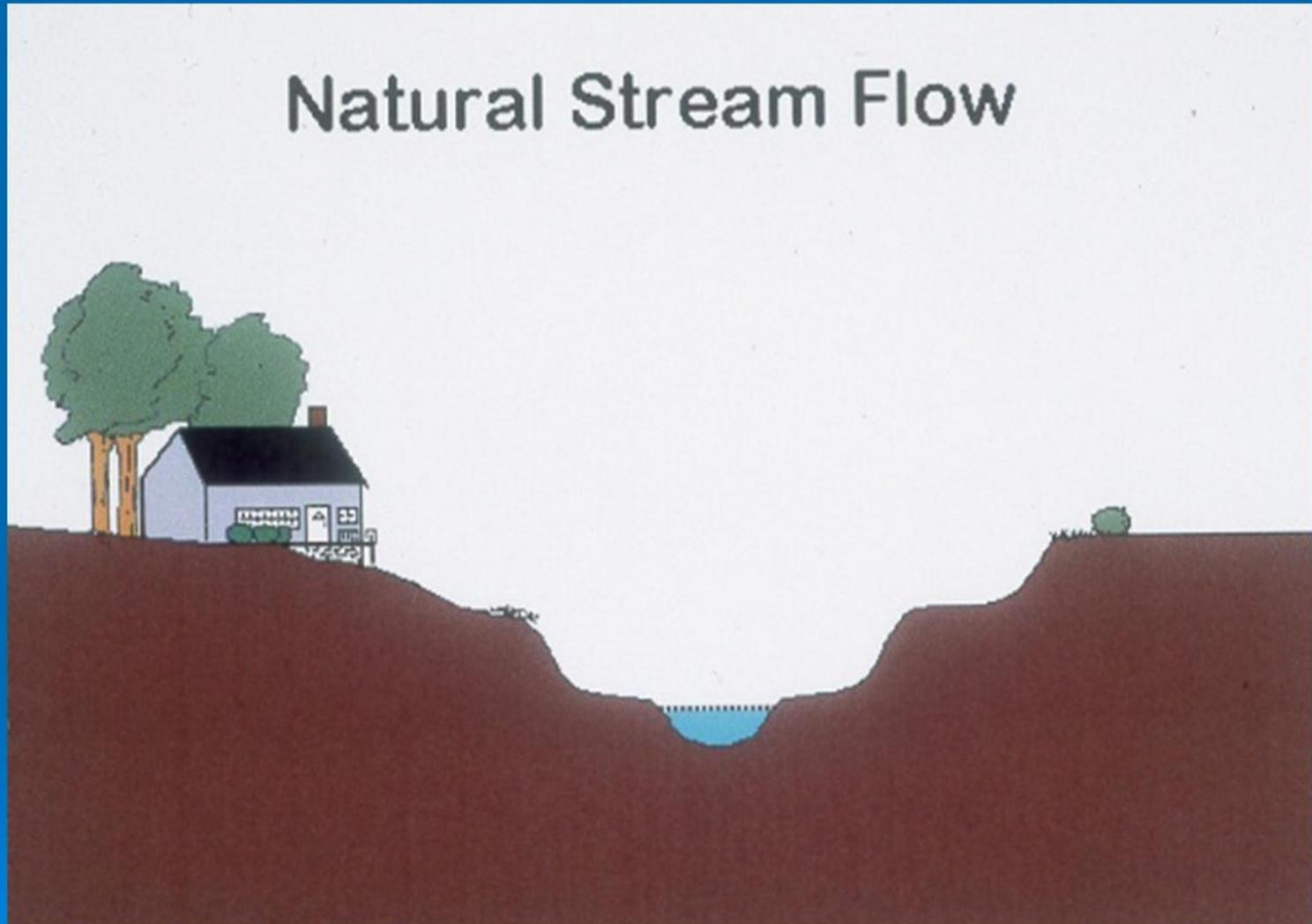
A flood that has a one-percent chance of being equaled or exceeded in any given year. It often is referred to as the ~~“100-year” flood.~~

“1% chance flood”

What is a Special Flood Hazard Area (SFHA)?

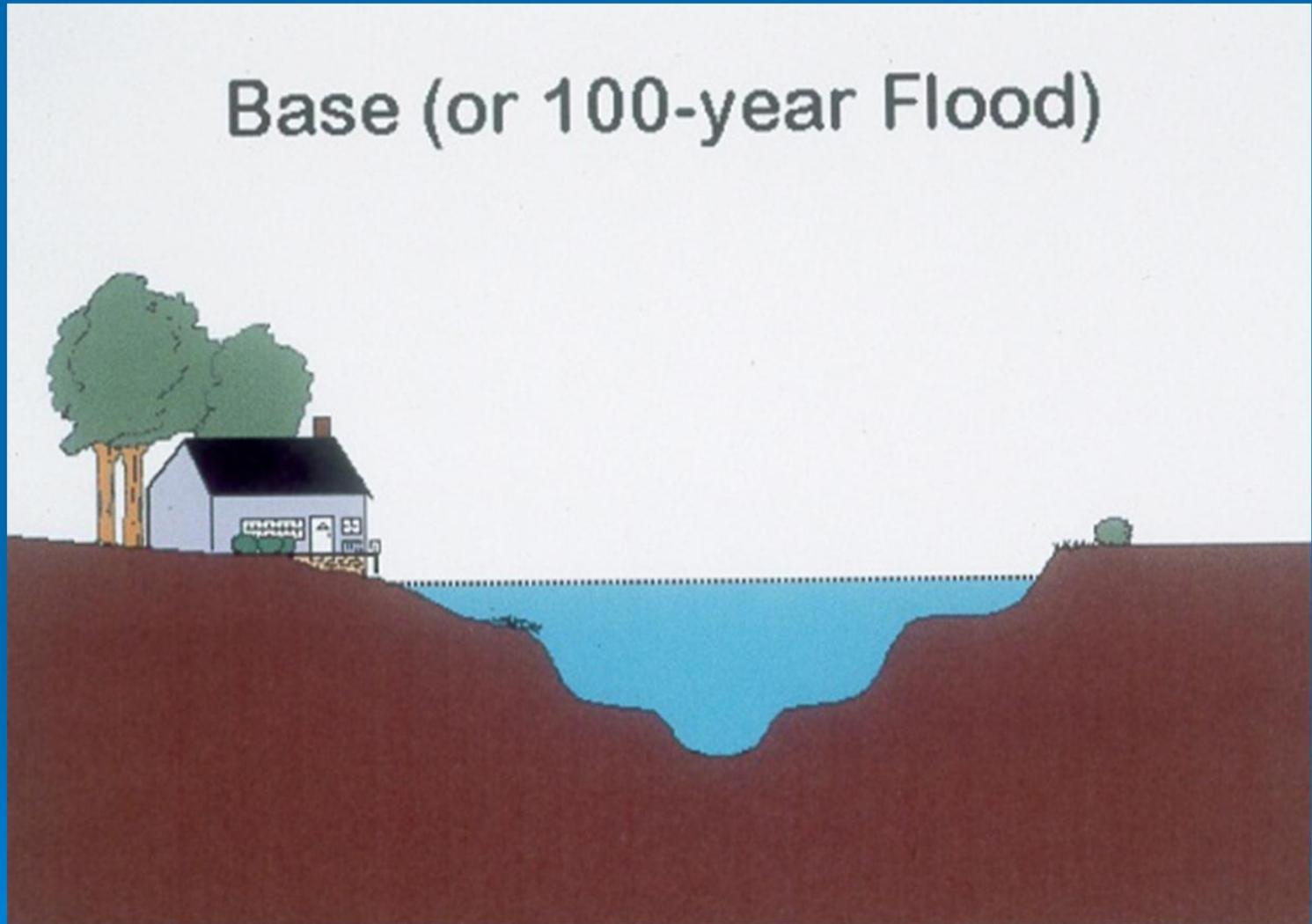
- Land areas that are at **High Risk** for flooding are called Special Flood Hazard Areas (SFHA), or floodplains.
- These areas are indicated on Flood Insurance Rate Maps (FIRMS) as A Zones.

Understanding the Floodplain

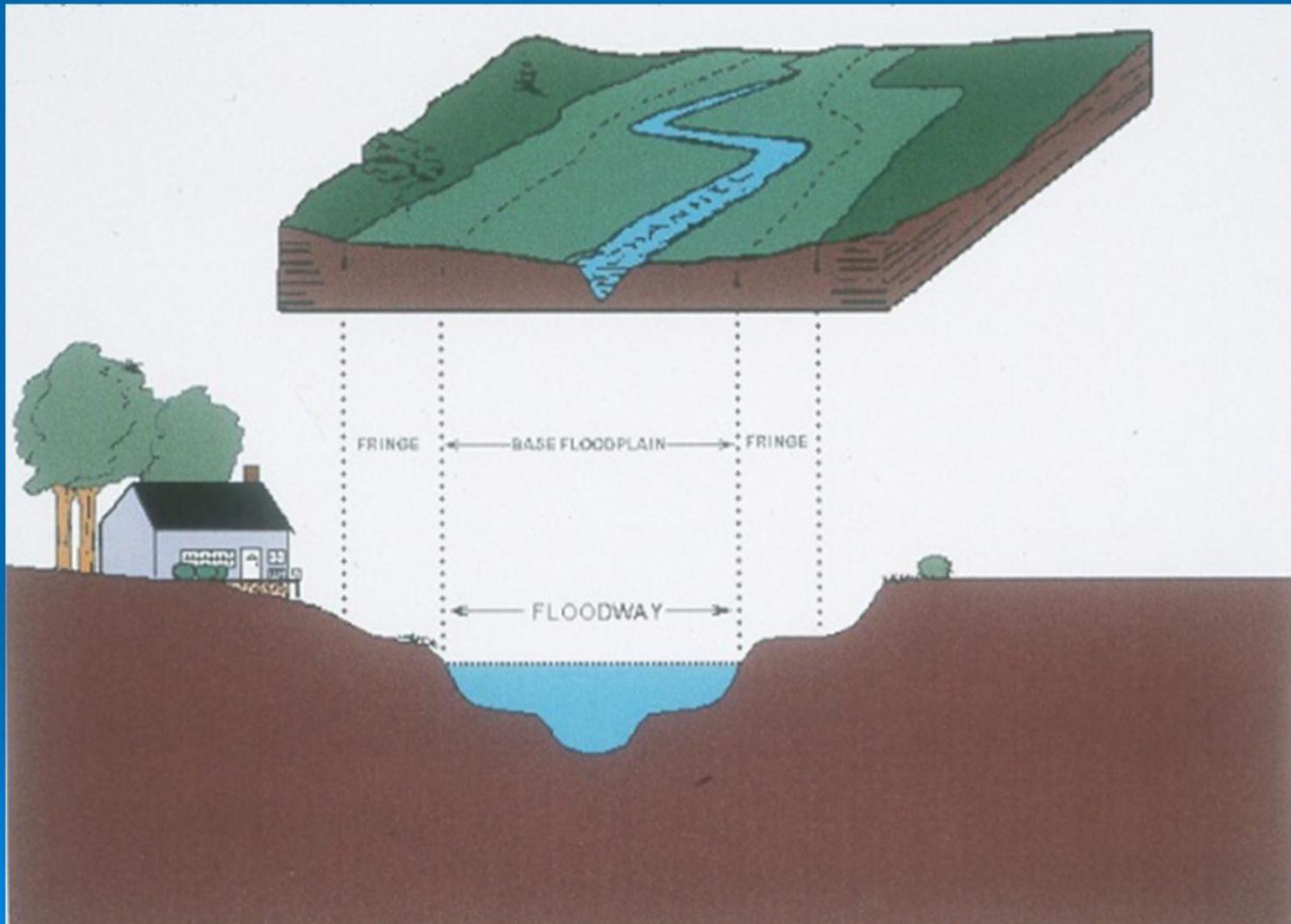


Understanding the Floodplain

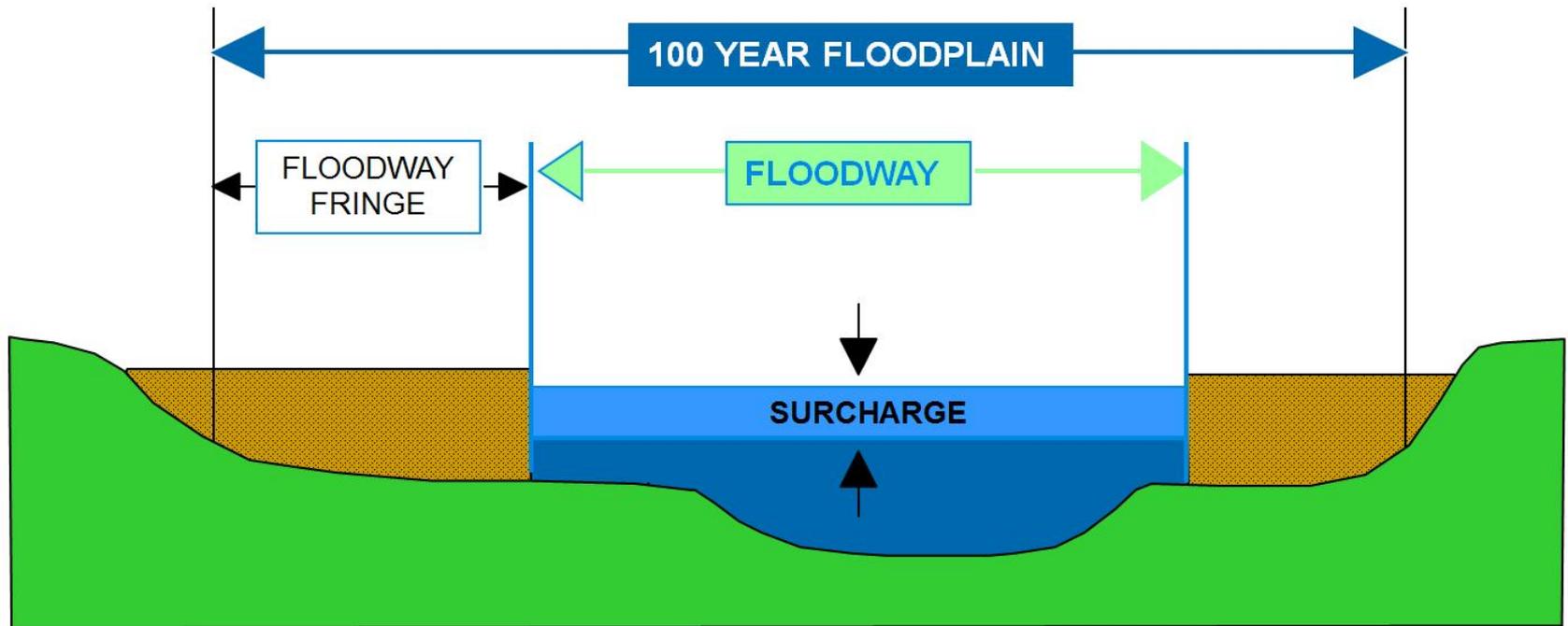
Base (or 100-year Flood)



Understanding the Floodway

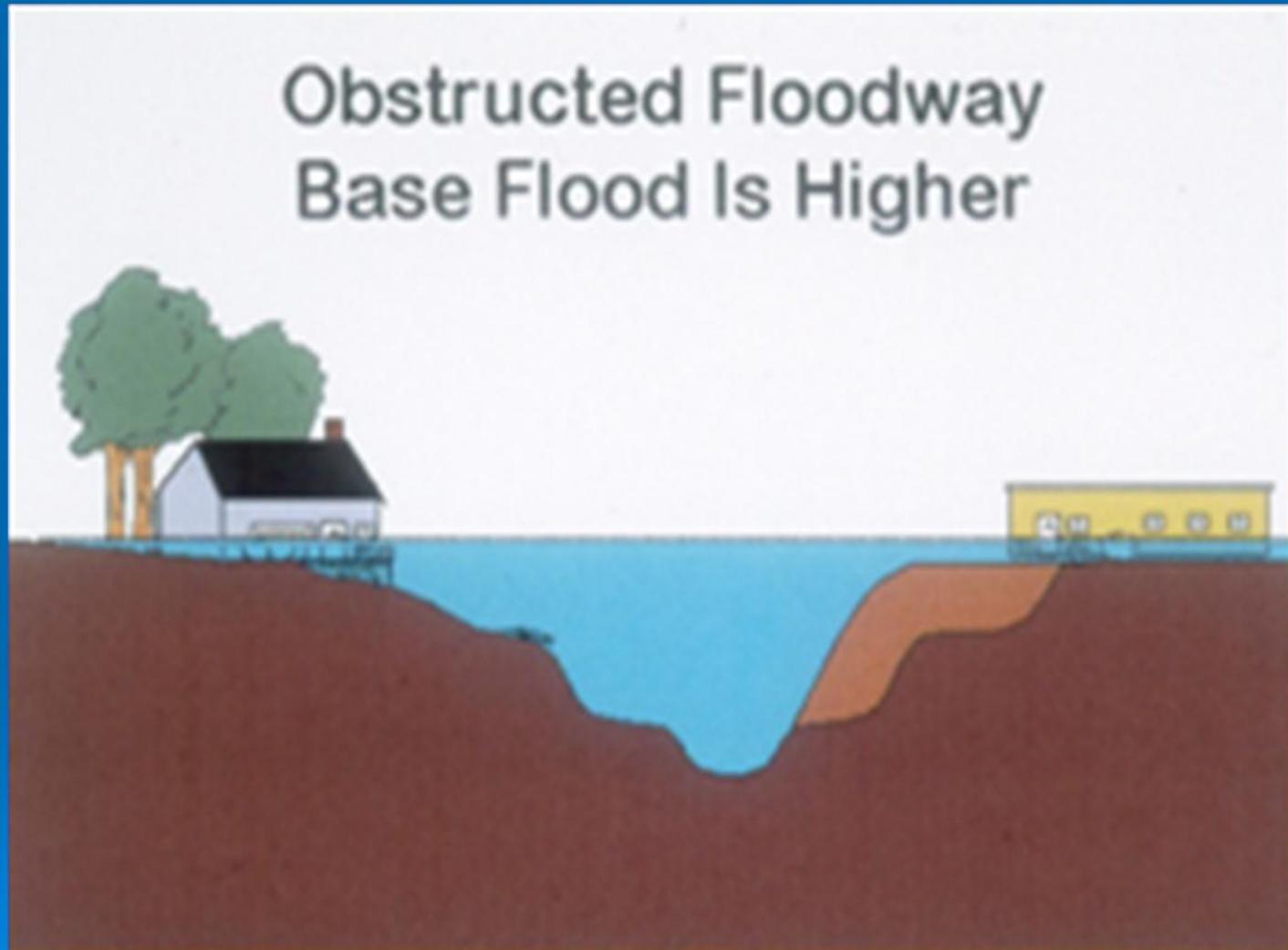


Understanding the Floodway

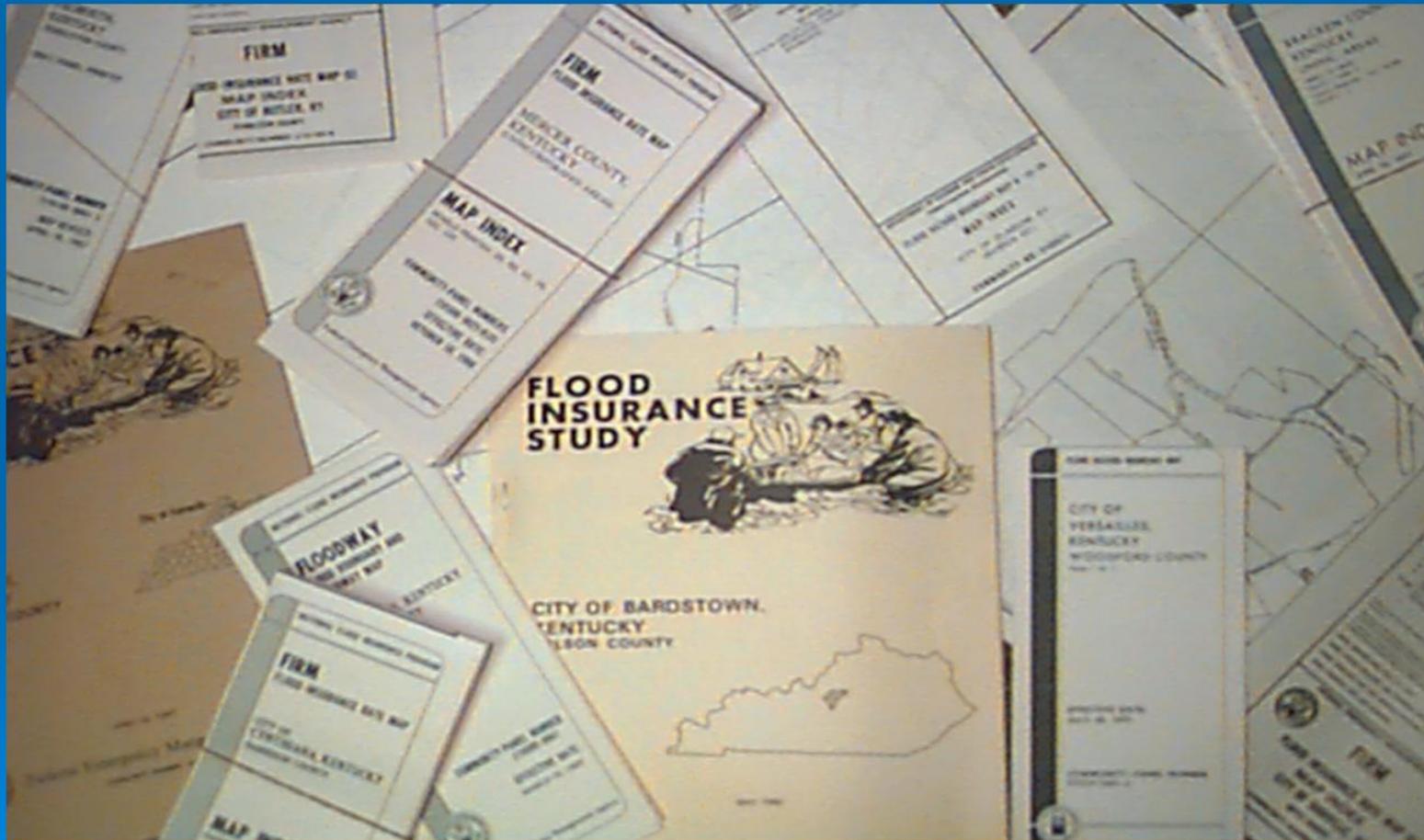


FLOODWAY + FLOODWAY FRINGE = 100 YEAR FLOODPLAIN
SURCHARGE NOT TO EXCEED 0.1 FOOT

Understanding the Floodway



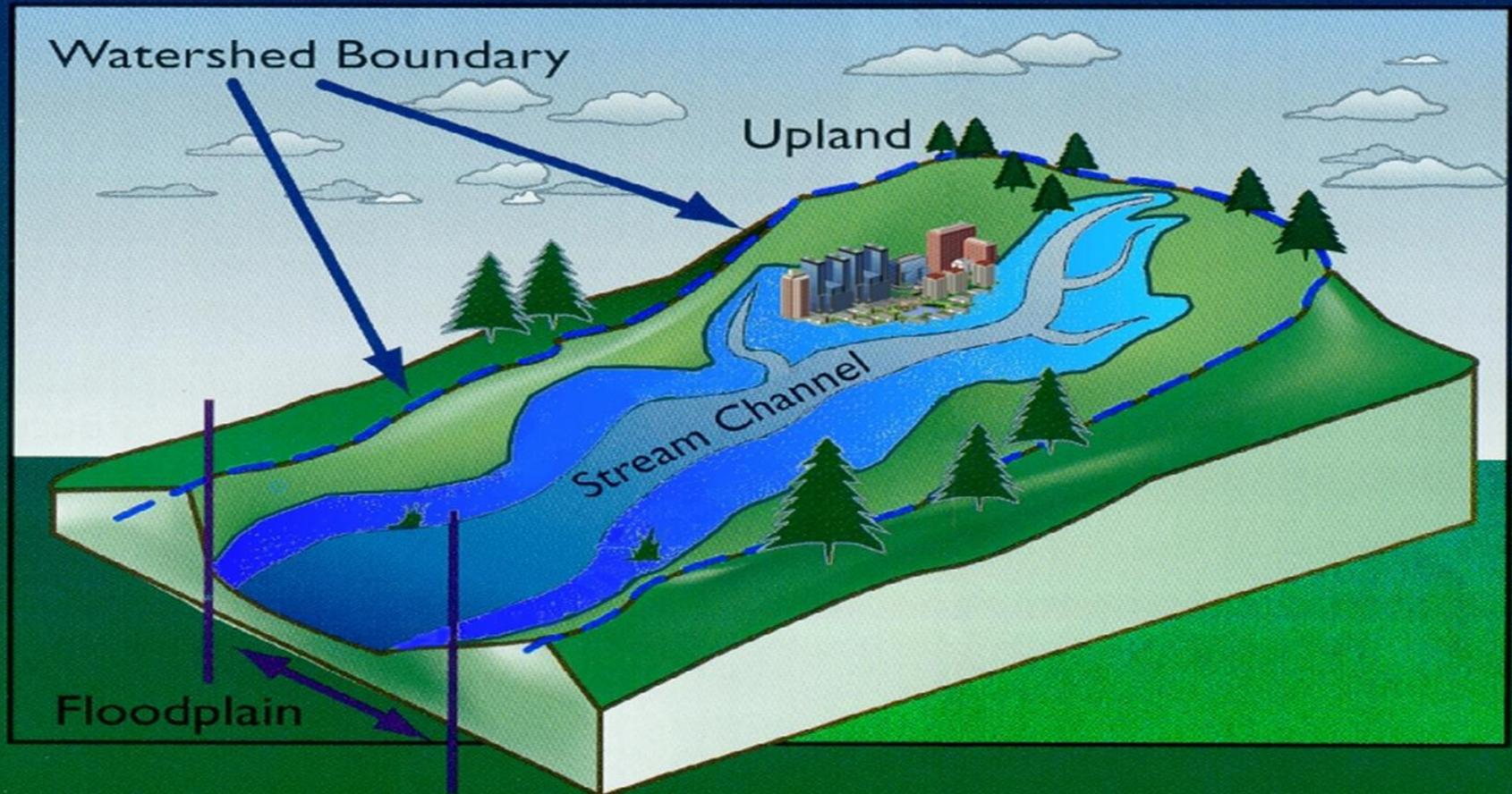
FLOODPLAIN MAPS



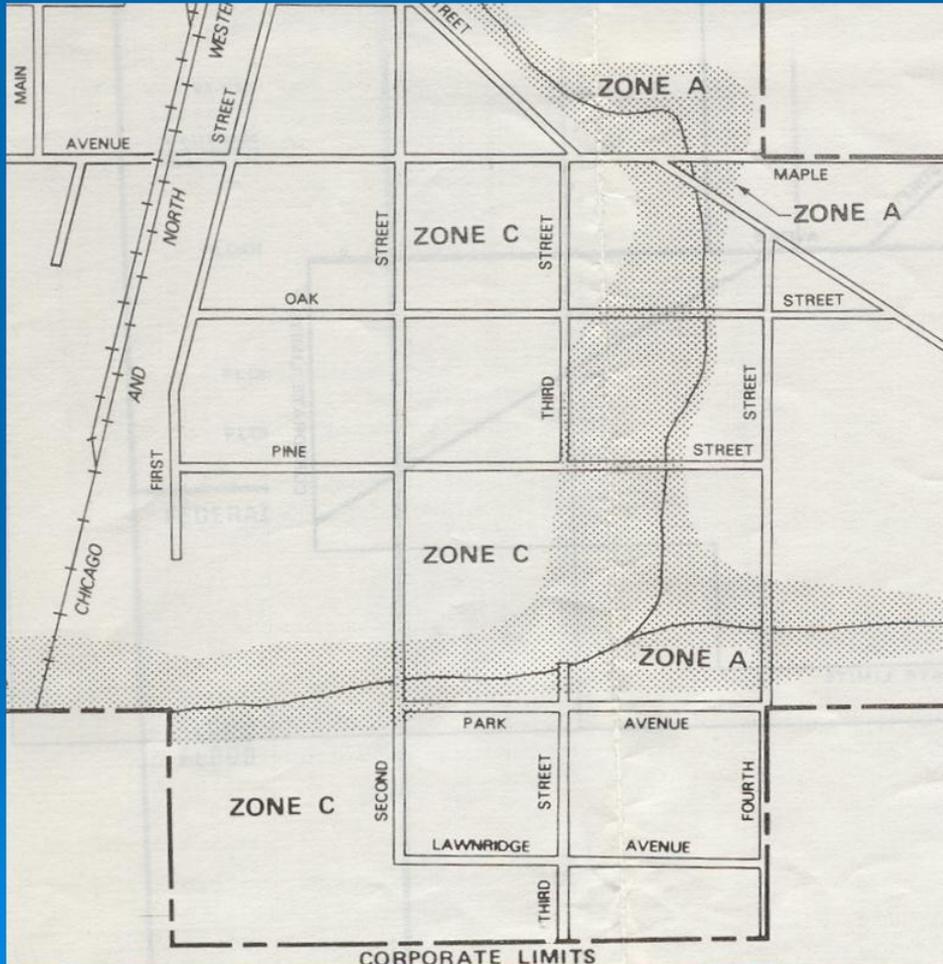
Existing Types Of Maps

- Flood Hazard Boundary Maps (FHBM)
- Flood Insurance Rate Map (FIRM)
- Flood Boundary Floodway Map
- Digital Flood Insurance Rate map (DFIRM)

How Do They Make Those EXCELLENT Floodplain Maps?



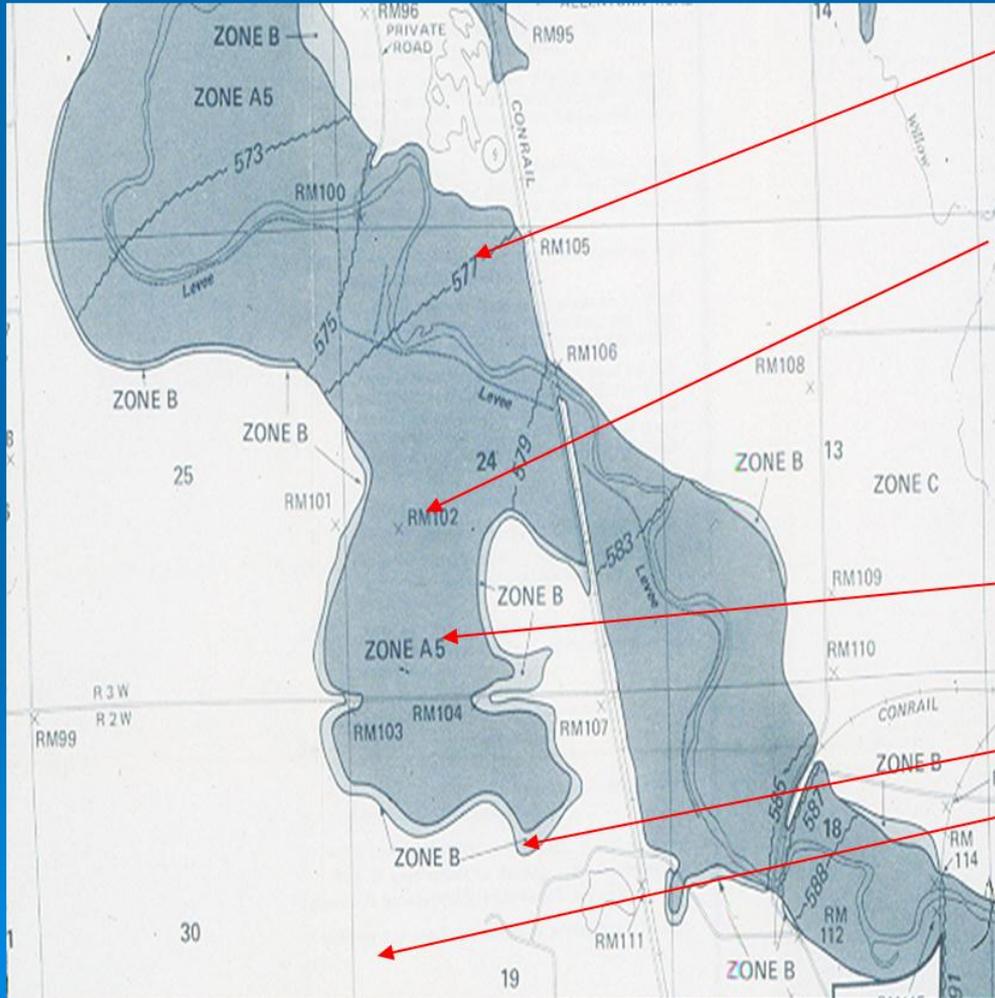
Approximate Floodplain Map (Flood Hazard Boundary Map)



Shows
approximate
location of
flood risk.

Detailed information
(ground elevation and
flood height) are
required to make
accurate determinations

Flood Insurance Rate Map (FIRM)



Base Flood Elevation (BFE)
Water Surface elevation (in feet) of the base flood at specific locations

Elevation Reference Marks (RM)
Points for which ground elevation data have been established and recorded on the FIRM

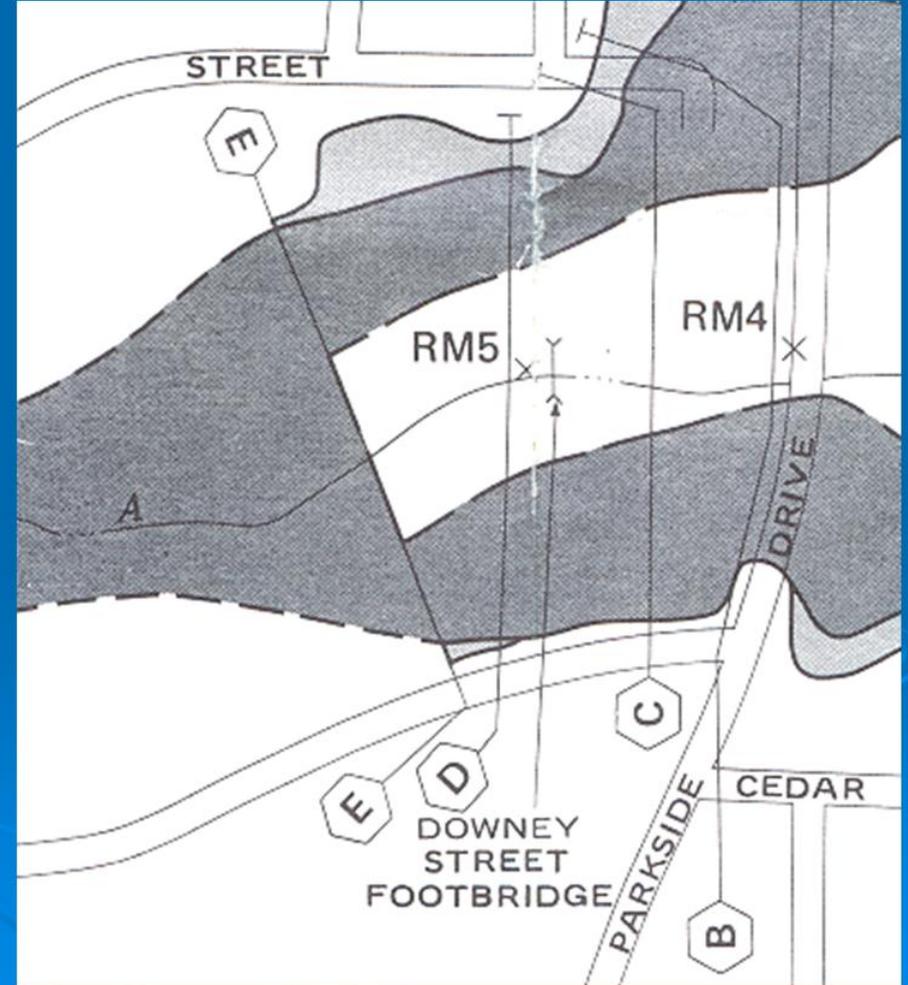
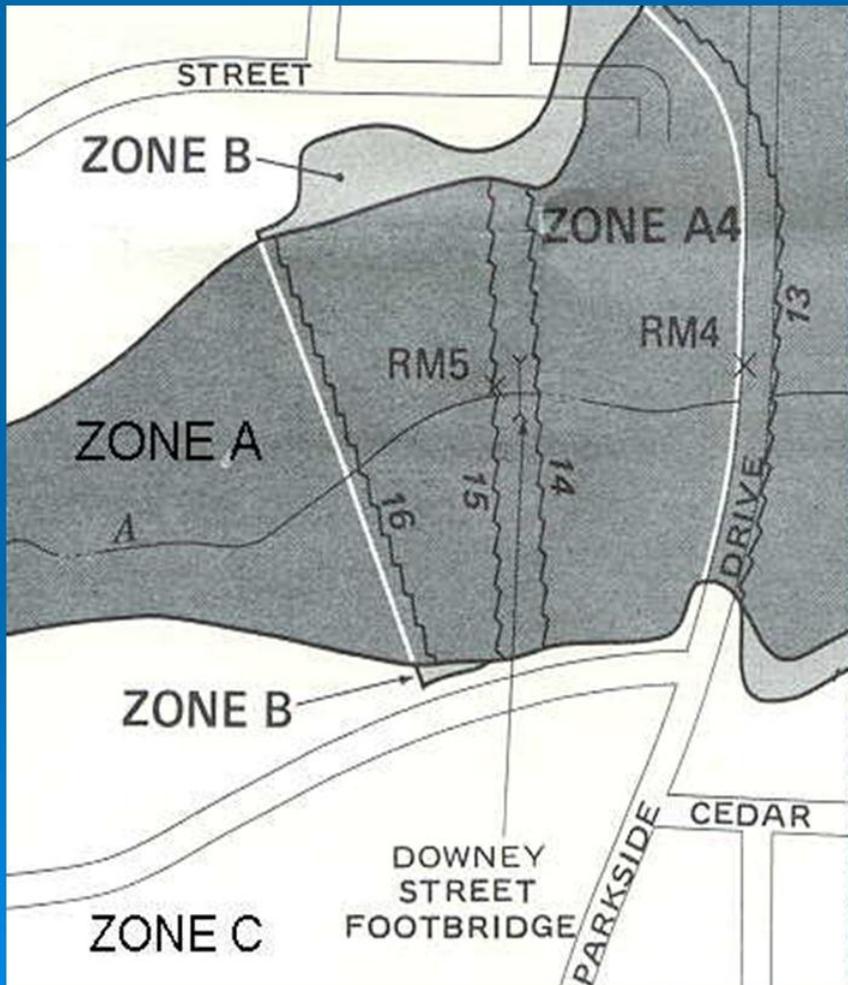
Flood Hazard Zones.

Zone A, Zone A1–A30, and Zone AE – 100-year or base flood

Zone B - 500 – year flood.

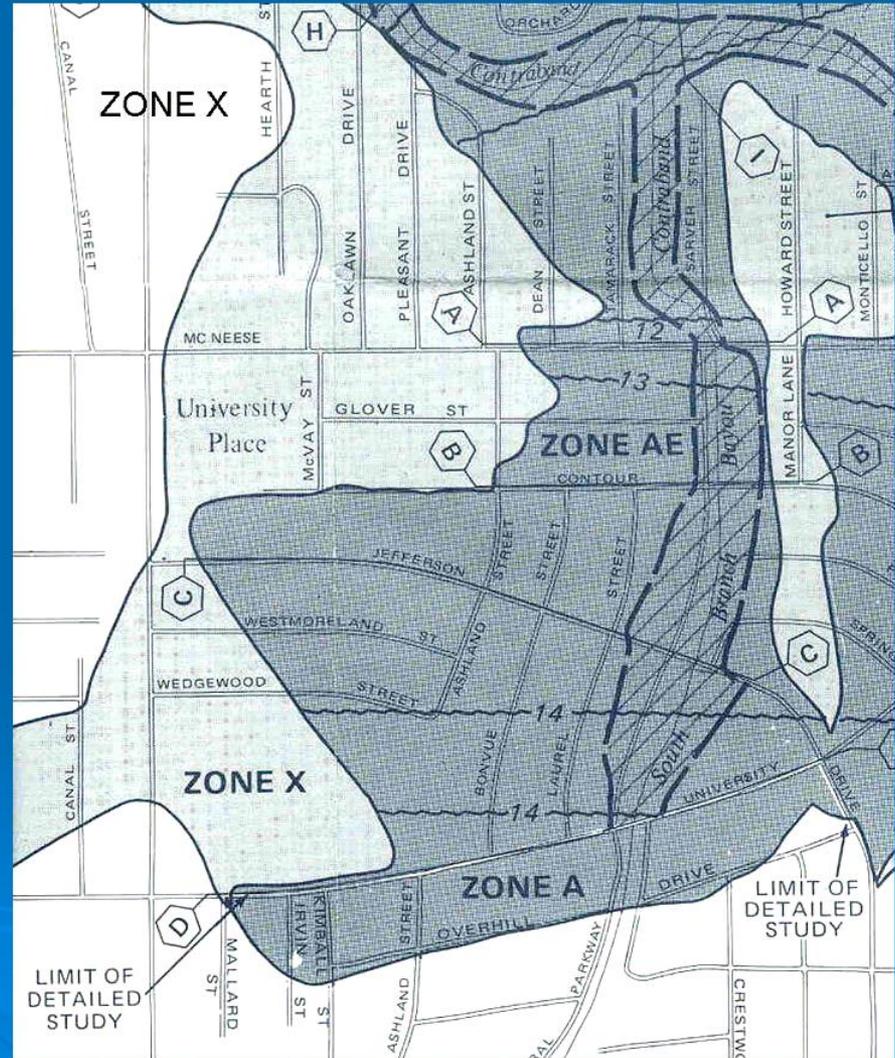
Zone C or X – All other areas

Flood Boundary and Floodway Map (old format)



Flood Insurance Rate Map (new format)

- Unshaded X Zone
- Zone AE
- Floodway
- Floodway fringe
- Cross section
- Base flood elevation
- Shaded X Zone
- Zone boundary
- Approximate A Zone



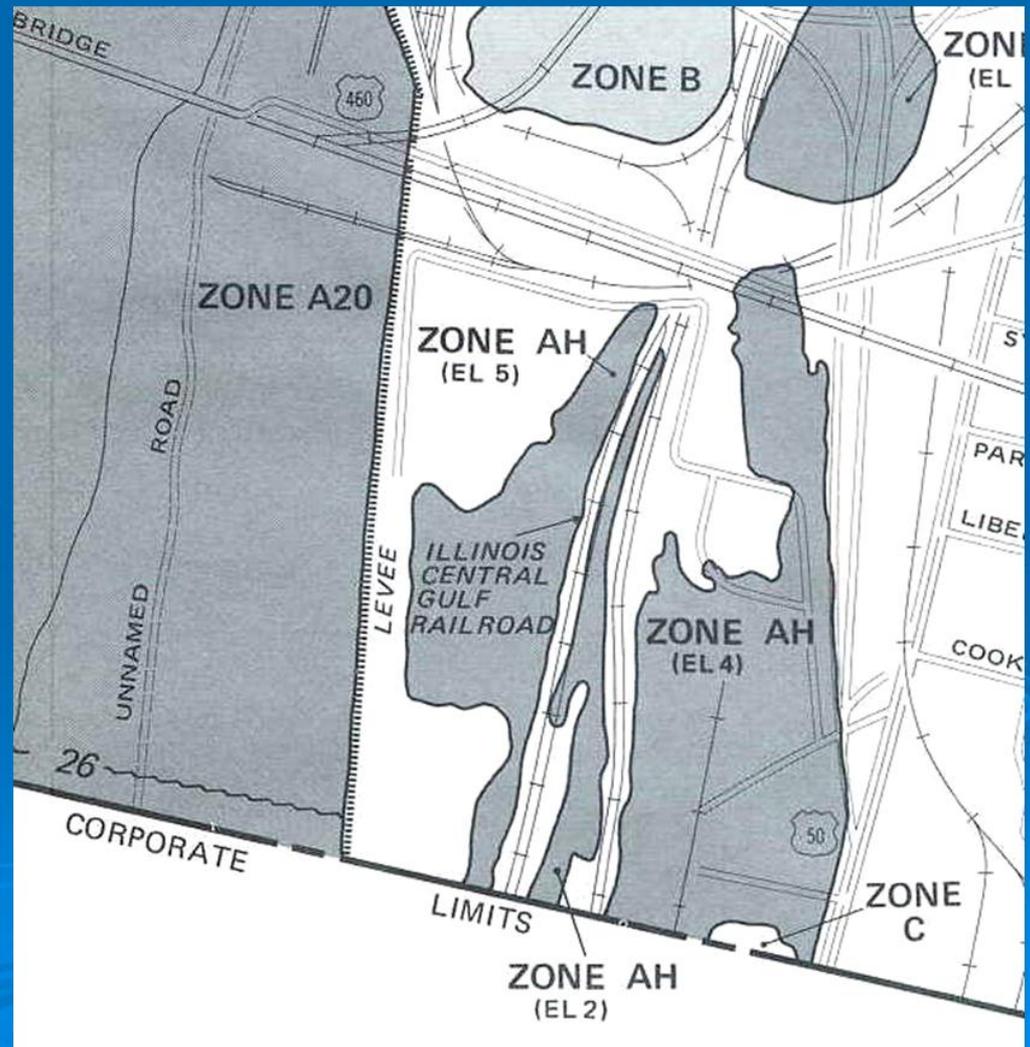
Other Floodplain Map Zones

Shallow flooding

AO –sheet flow

AH – ponding

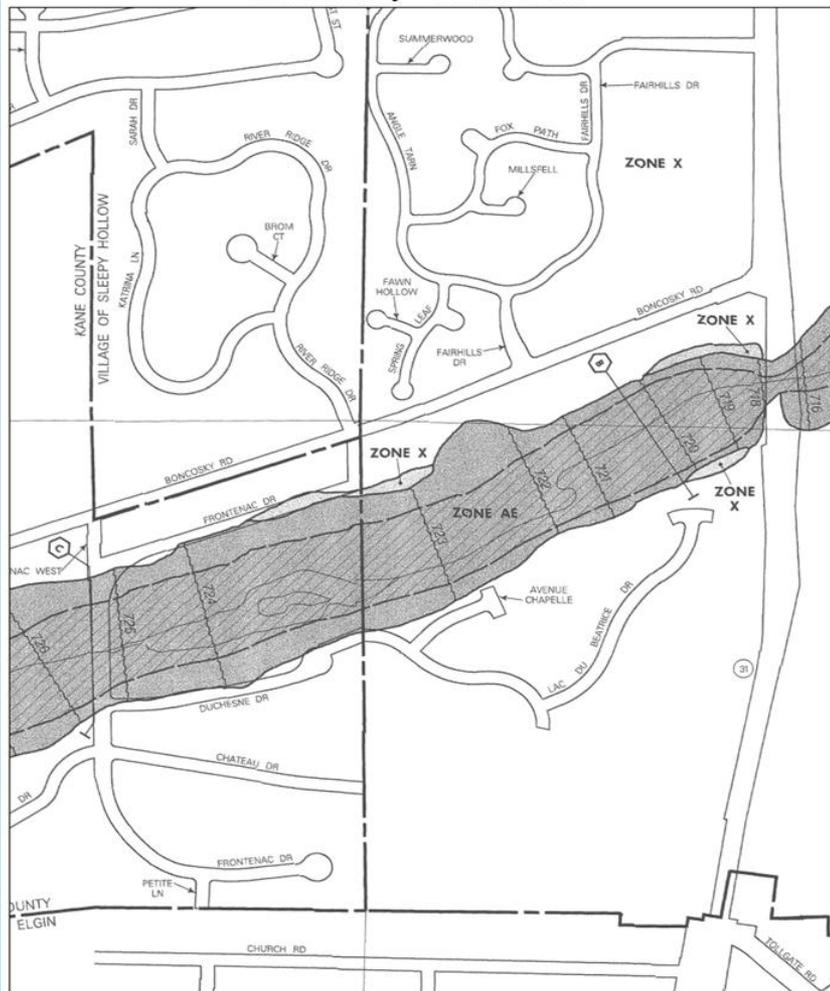
ZONE AO
(DEPTH 2')



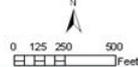
Digital Flood Insurance Rate Maps

The Next Generation

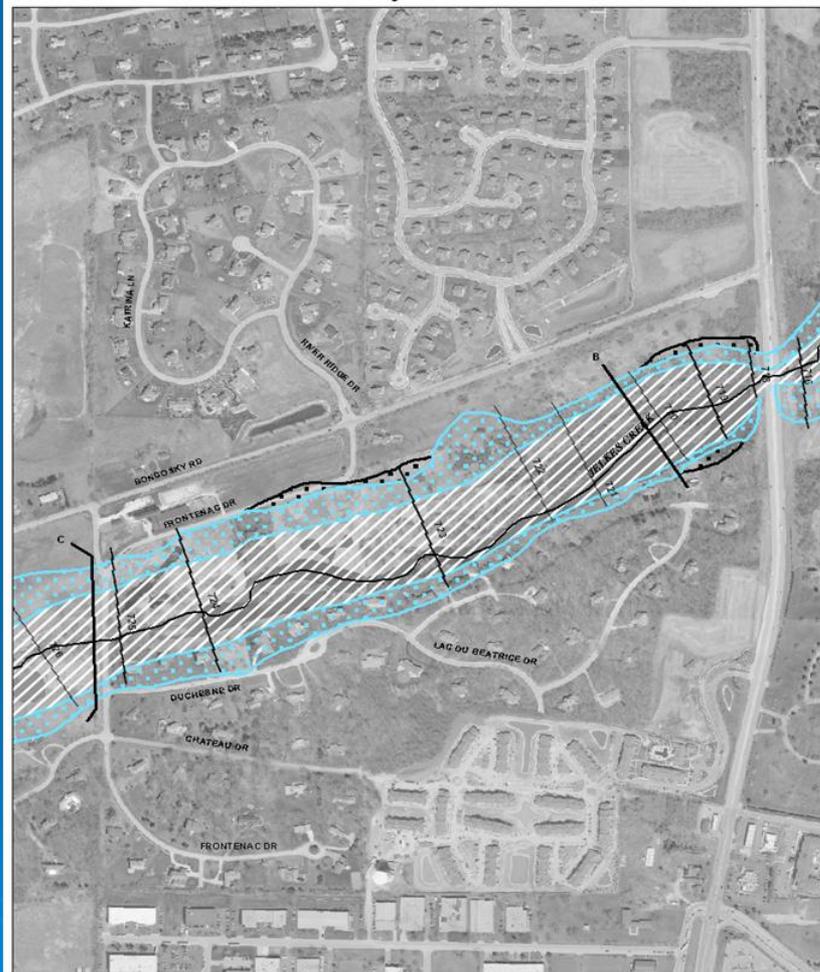
Original FIRM (Flood Insurance Rate Map)
Kane County - Jelkes Creek



KANE COUNTY, ILLINOIS AND INCORPORATED AREAS
PANEL 158 OF 410



DFIRM (Digital Flood Insurance Rate Map)
Kane County - Jelkes Creek



- Stream Centerline
- XS
- BFE
- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- 1 PCT ANNUAL CHANCE FLOOD HAZARD
- FLOODWAY

Advantages of DFIRMs

- Map revisions will be faster and easier – months instead of years
- Communities will be able to use the digital flood map data with their local data, such as parcel data
- The new flood risk maps will cover entire counties
- If a community is located in more than one county, it will be mapped only to the county border

Keithsburg, Illinois Flood Map

(Wow! We are we GOOD!)

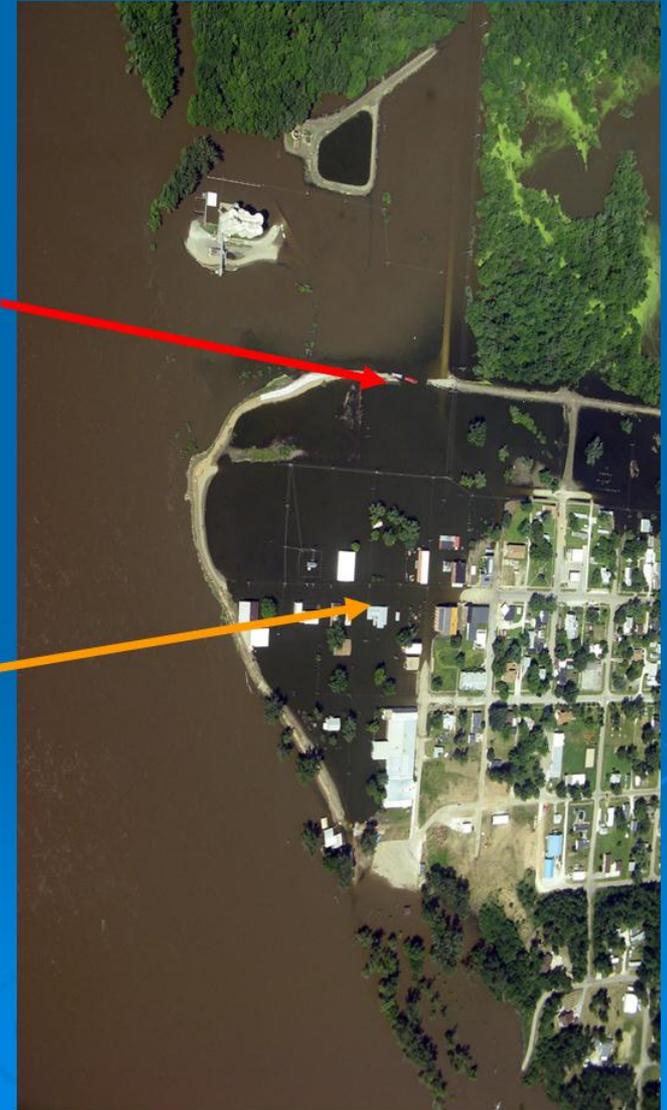


Cargil Grain Elevator

2008 Levee Breach

Jackson Street (110 buyouts in 1993)

Downtown



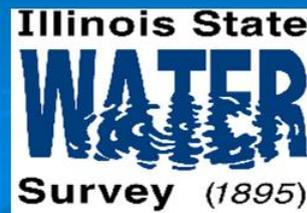
2008 Flooding

Keithsburg, Illinois



Illinois Flood Map Modernization

- Illinois Department of Natural Resources
 - Office of Water Resources
 - Illinois State Water Survey
- Federal Emergency Management Agency



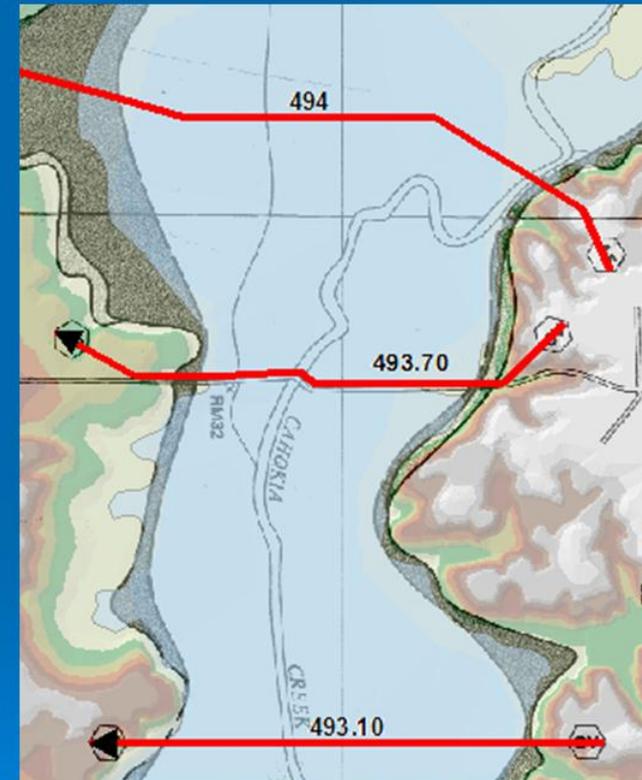
Flood Map Modernization

- FEMA 5-year, \$1 billion national program
- IDNR has a Cooperating Technical Partner agreement with FEMA to convert maps in Illinois — 96 counties
- Illinois is one of just a few states doing the actual mapping
- FEMA sets the schedule and the funding -- annually updated in the Multi-Year Flood Hazard Identification Plan

Mapping Process

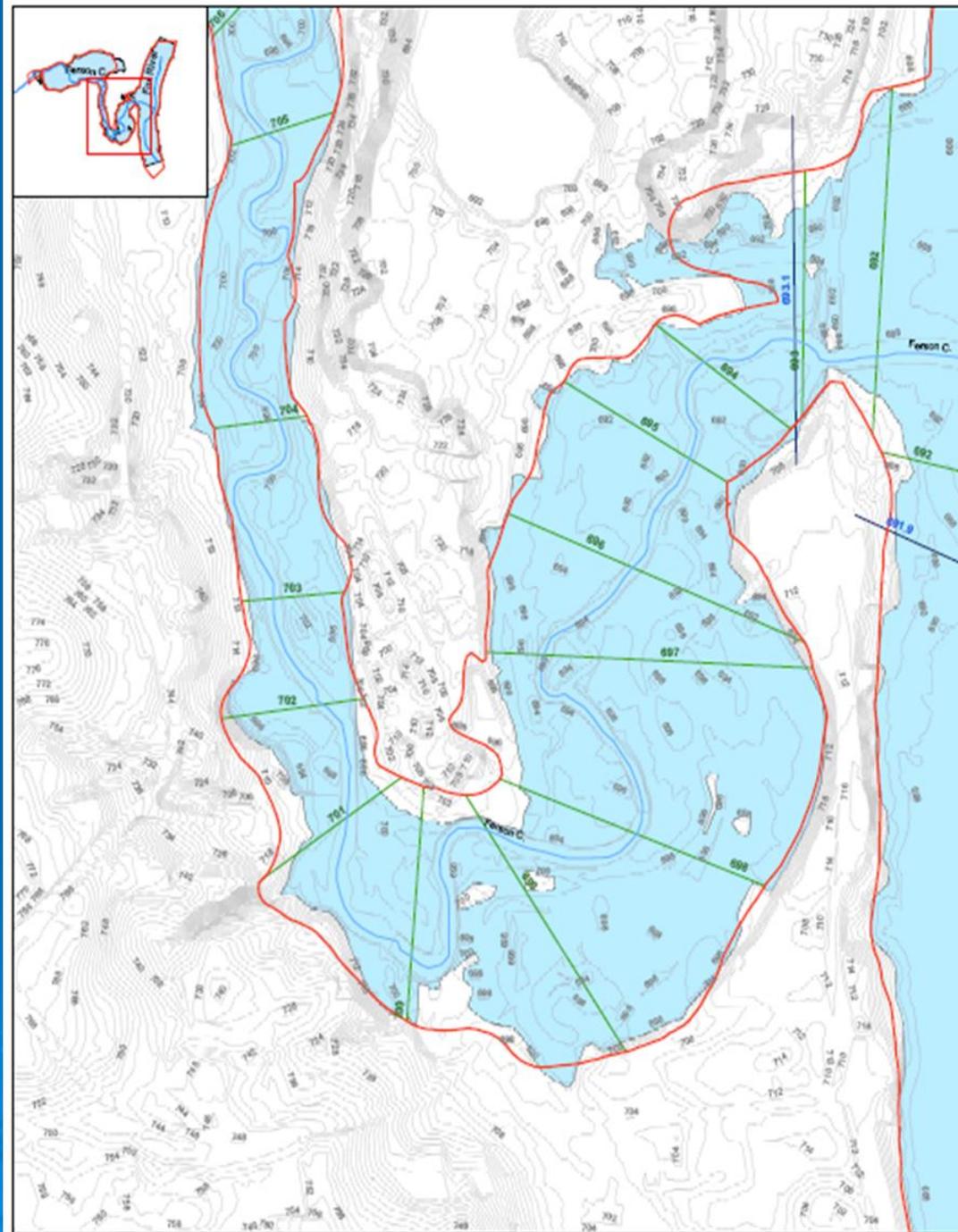
Convert FIRM

- Register (align) existing FIRM **to the community base map**
- Digitize flood data (floodplain boundaries, cross sections, BFEs, etc.)
- Convert to NAVD 1988 vertical datum
- Incorporate LOMCs



Example Redelineation

-  Redelineated SFHA
-  Original FIRM SFHA
-  Cross section
-  Base flood elevation
-  LIDAR-contour lines



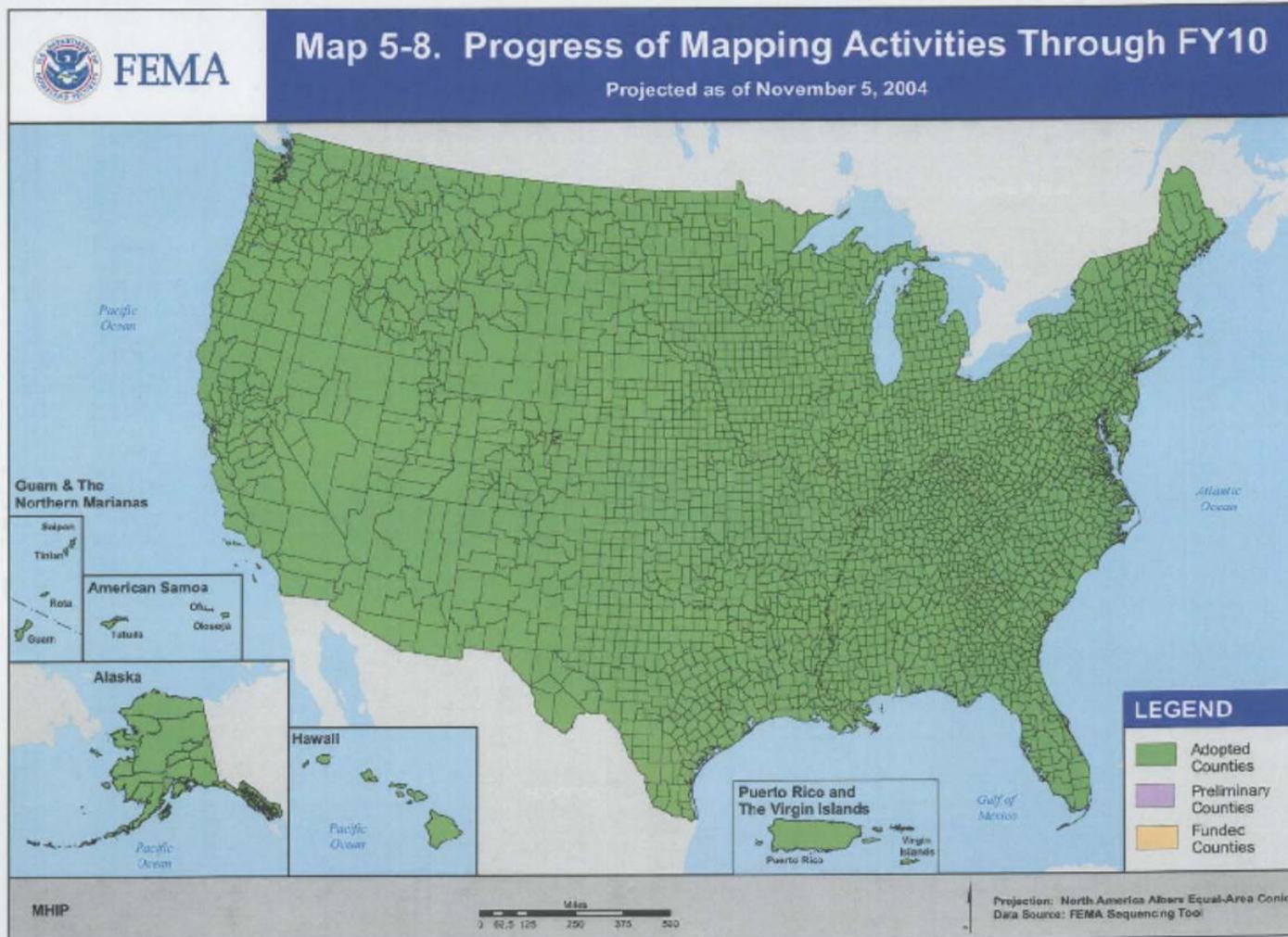
What About Areas That Need a New Study?

**Get a FEMA map revision
prior to our re-mapping!!**



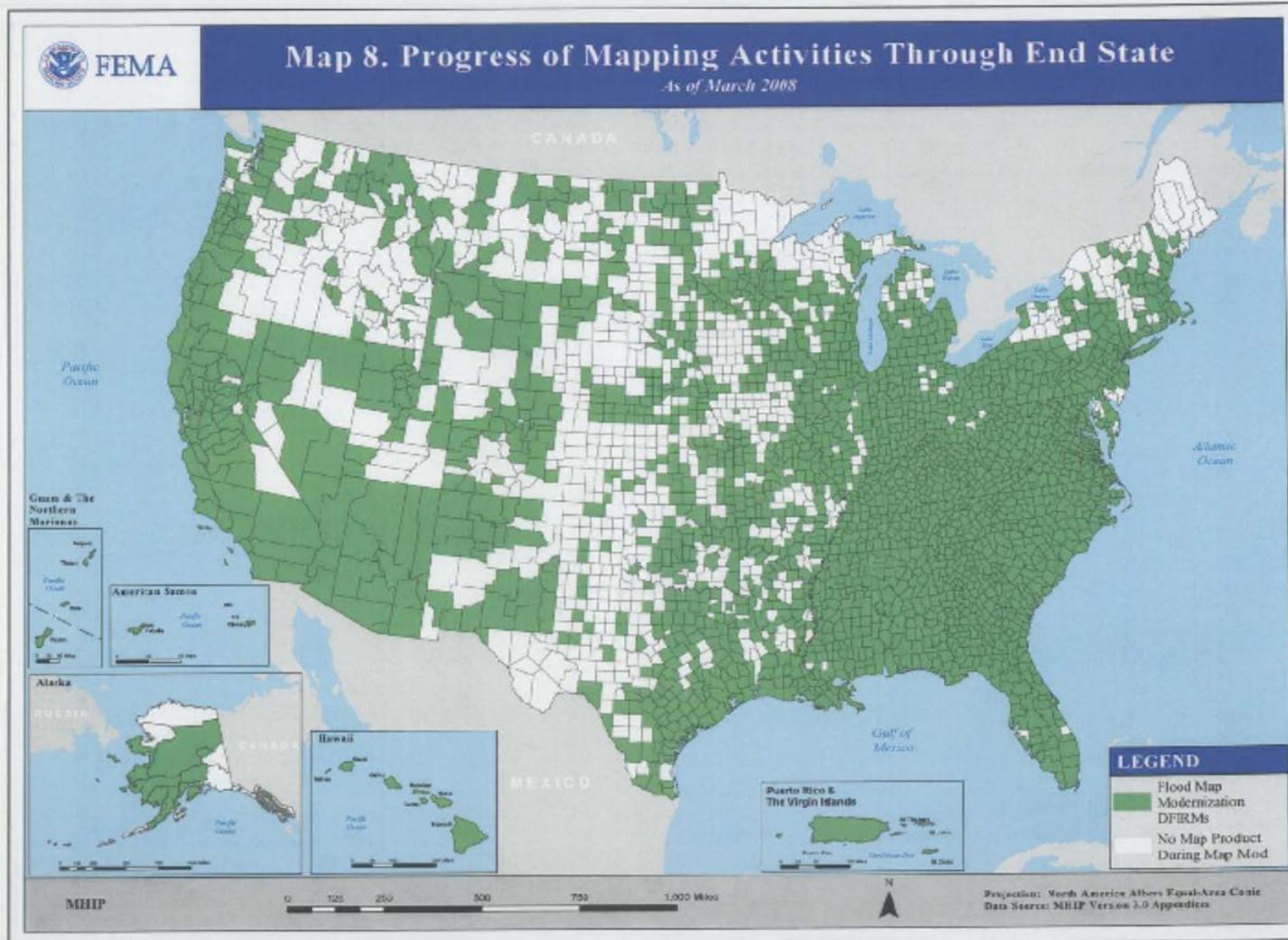
FEMA

Map Mod Vision – Nov. 2004



FEMA

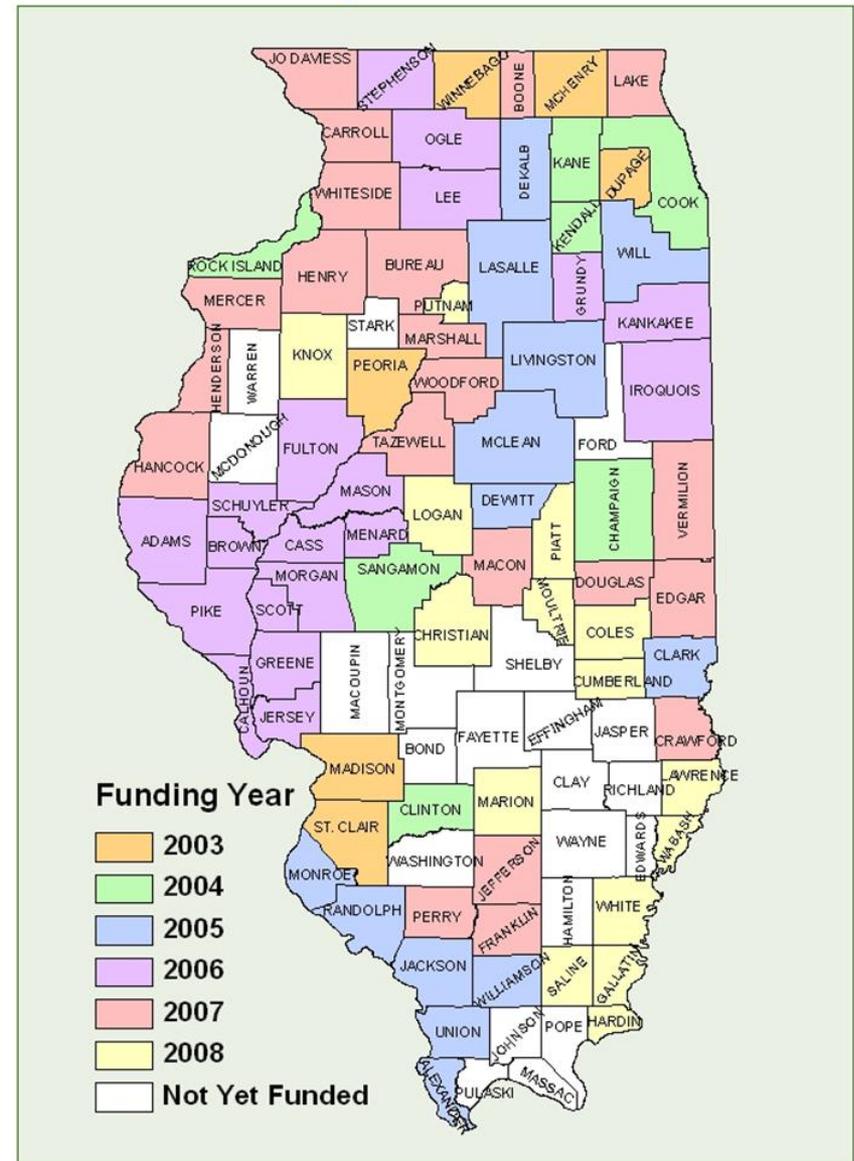
Map Mod Reality – March 08



County Schedule

Illinois Flood Map Modernization

Map Mod Schedule



Illinois Flood Map Modernization

FEMA FLOOD MAP STORE

WEB2.MSC.FEMA.GOV

1-800-358-9616

- Online mapping products:
 - Digital Flood Insurance Rate Maps (DFIRM)
 - Flood Insurance Rate Maps (FIRMs)
 - Flood Insurance Study reports (FIS reports)
 - Digital Q3 flood data
 - Community Status Book
 - Flood Map Status Information Service (FMSIS)
 - Letters of Map Change (LOMCs)
 - NFIP Insurance Manuals.

The “FIRMette”

- Available online
- Scaled to use as regulatory map
- Printable
- www.FEMA.gov
 - Click “Map Store”
 - Click “Map Search”
 - Type in address
 - Click “view” map

Paper Map?

A thing of the past.....

- As of October 1, 2008, customers may **ONLY** order Digital maps:
 - New DFIRM in GIS
 - Old non-converted maps will simply be scanned pdfs.
 - Existing paper maps in the warehouse will not be distributed. They have been recycled!

FEMA Map Service Center



FEMA

Map Service Center

[Product Catalog](#) | [Map Search](#) | [Quick Order](#) | [Digital Post Office](#) | [Help](#)

Product Search by...

Address

Map Panel ID

1) Select a Product:

Flood Maps

2) Enter an Address:

Street:

City:

State: Zip:

New to the FEMA Map Service Center?

- Homeowners/Renters
- Real Estate/Flood Determination Agents
- Insurance Agents
- Engineers/Surveyors
- Federal/Exempt Customers

What are you looking for?

- Flood Maps
- FIRMettes
- DFIRM Databases
- MapViewer - Web
- Documents, Publications & Forms

More Information

- Product Availability
- How do I find the flood map for my area?
- What is a FIRMette?
- How do I find a LOMC?
- Definitions of FEMA Flood Zone Designations
- Product Information
- Price List
- How to Order
- Need Assistance?

Log On

User ID (email address):

Password:

[Forgot Password?](#)

[Register](#)

[Why register?](#)

Announcements

FEMA Digital Vision

On October 1, 2009, as part of FEMA's Digital Vision initiative, the FEMA MSC discontinued general distribution of paper mapping products. This affects Flood Insurance Rate Maps, Flood Hazard Boundary Maps, Flood Boundary and Floodway Maps, and Flood Insurance Study reports. Customers can continue to view these products free of charge and/or purchase them in digital formats. For more information, click [here](#) to visit our Digital Vision page.

FIRMette - Desktop 3.1 Upgrade

Update. The Map Service Center now has version 3.1 of the FIRMette - Desktop viewer available for download. This new version includes additional features that allow users to search for map panels by address or coordinates, search for and download Letter of Map Changes (LOMCs) for a panel, and print full-size Flood Insurance Rate Maps. You can download it [here](#).

[\(learn more\)](#)

MapViewer - Desktop 2.04

FEMA has updated its MapViewer Desktop tool for viewing GIS flood data. Significant improvements to v. 1.0 had been made, including support for internet-based data.

NFHL

National Flood Hazard Layer [\(learn more\)](#)

View the NFHL Online using [MapViewer - Web](#)

Order [NFHL GIS Datasets](#) by state on DVD

Use [Web Map Service](#) in your own GIS application

Use [Web Map Service](#) in Google Earth™

[Got Comments?](#)

FIRMette Tutorial

Learn how to create FIRMettes. They're free!



[Click here to learn how to create a FIRMette.](#)

Illinois Floodplain Maps

Site Map

Home
About Map/Mod
IL Business Plan
Related Links
SFMA at Risk
DMAUD Brochure
Destined For DFIRVs
Discovery Map
Contact
Jump to DFIRM Maps
Choose County
Go
Unmapped Special Flood Hazard Areas
FEMA
I

The [Map Modernization Project](#), at the Illinois State Water Survey, is providing preliminary and final maps on this web site. Maps revised between preliminary and final phases are not posted. To download or view a map, click the boxed counties on the map below. Counties in red are preliminary, and are for review purposes only. **Preliminary maps are not official, and are not to be reproduced or used as official FEMA maps until they are finalized.** There is a six month period, before maps become effective, in which the community updates, revises, and adopts ordinances to comply with the new FEMA maps. During this six month period a county's status is considered final. Counties in blue have final maps. Counties in green have become effective. Please see our [FAQ](#).

To view completed meeting dates and the status of Map Modernization in your County, click [here](#).

DFIRM Status

- Effective
- Final
- Preliminary
- In Progress
- Not Funded

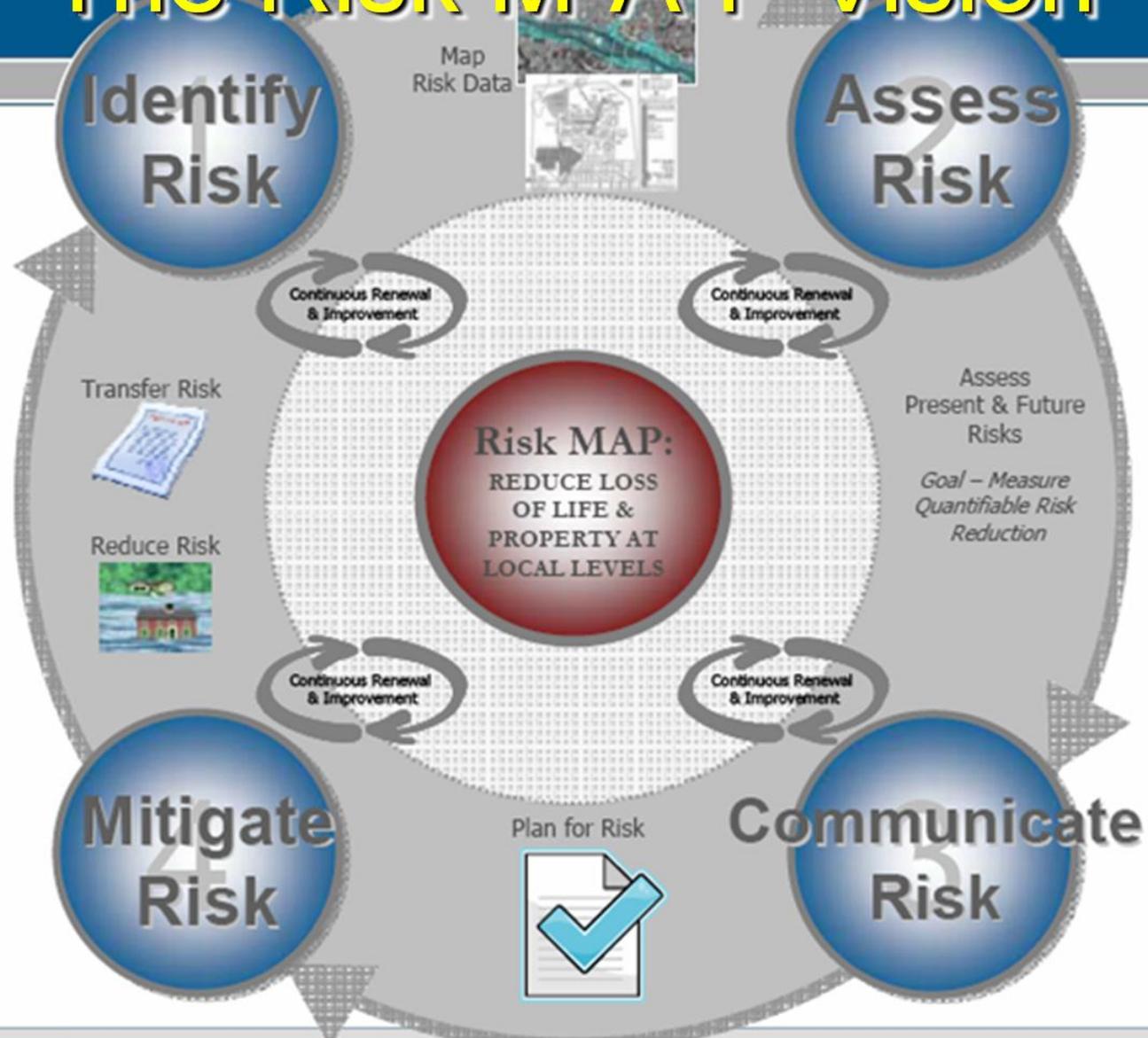
* Status as of 12/17/10

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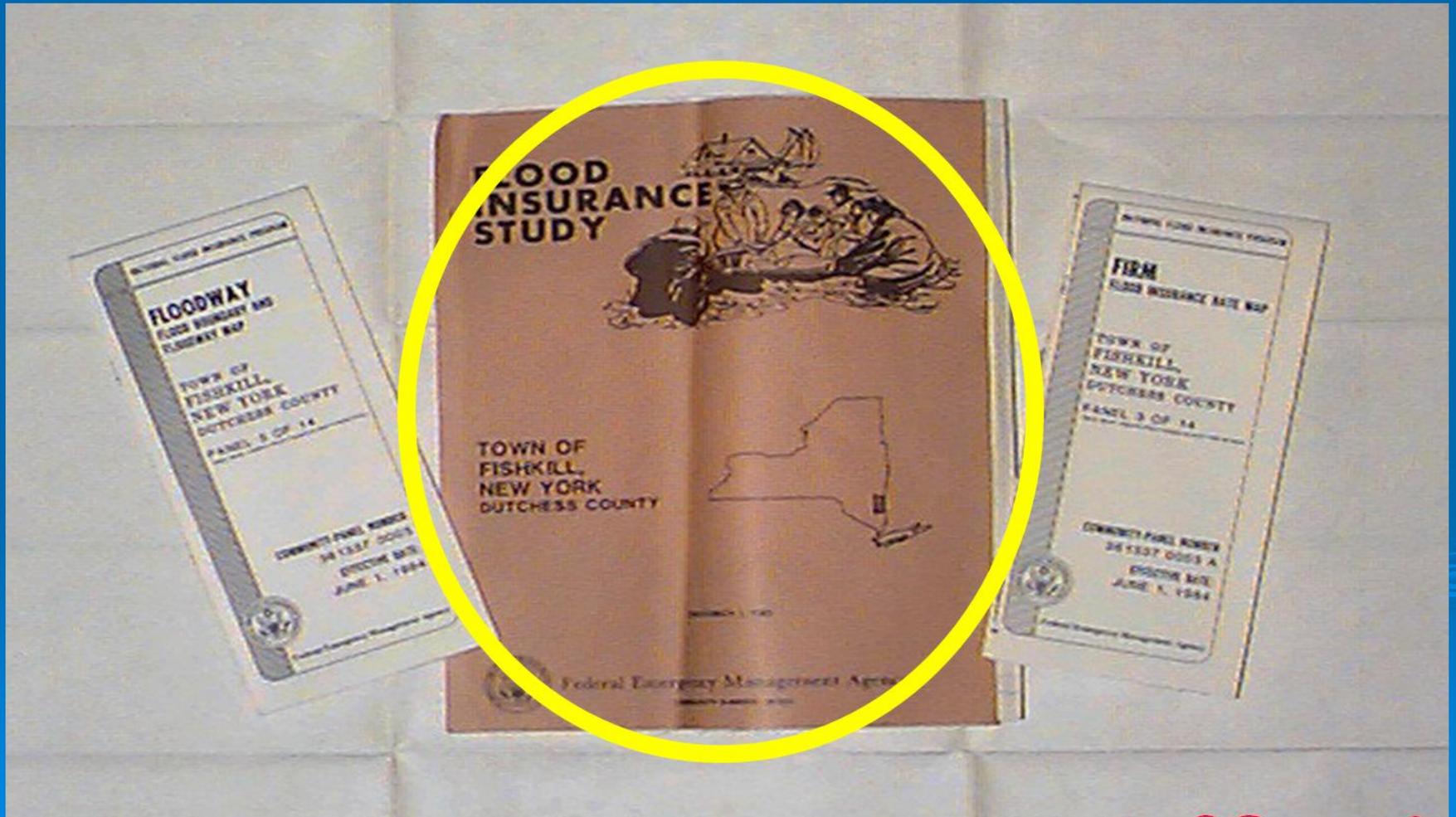
[Home](#) [About Map/Mod](#) [IL Business Plan](#) [Related Links](#) [SFMA at Risk](#) [Contact](#)

Data & Map Disclaimer Privacy Contact

The Risk M-A-P Vision



Flood Insurance Study (FIS)



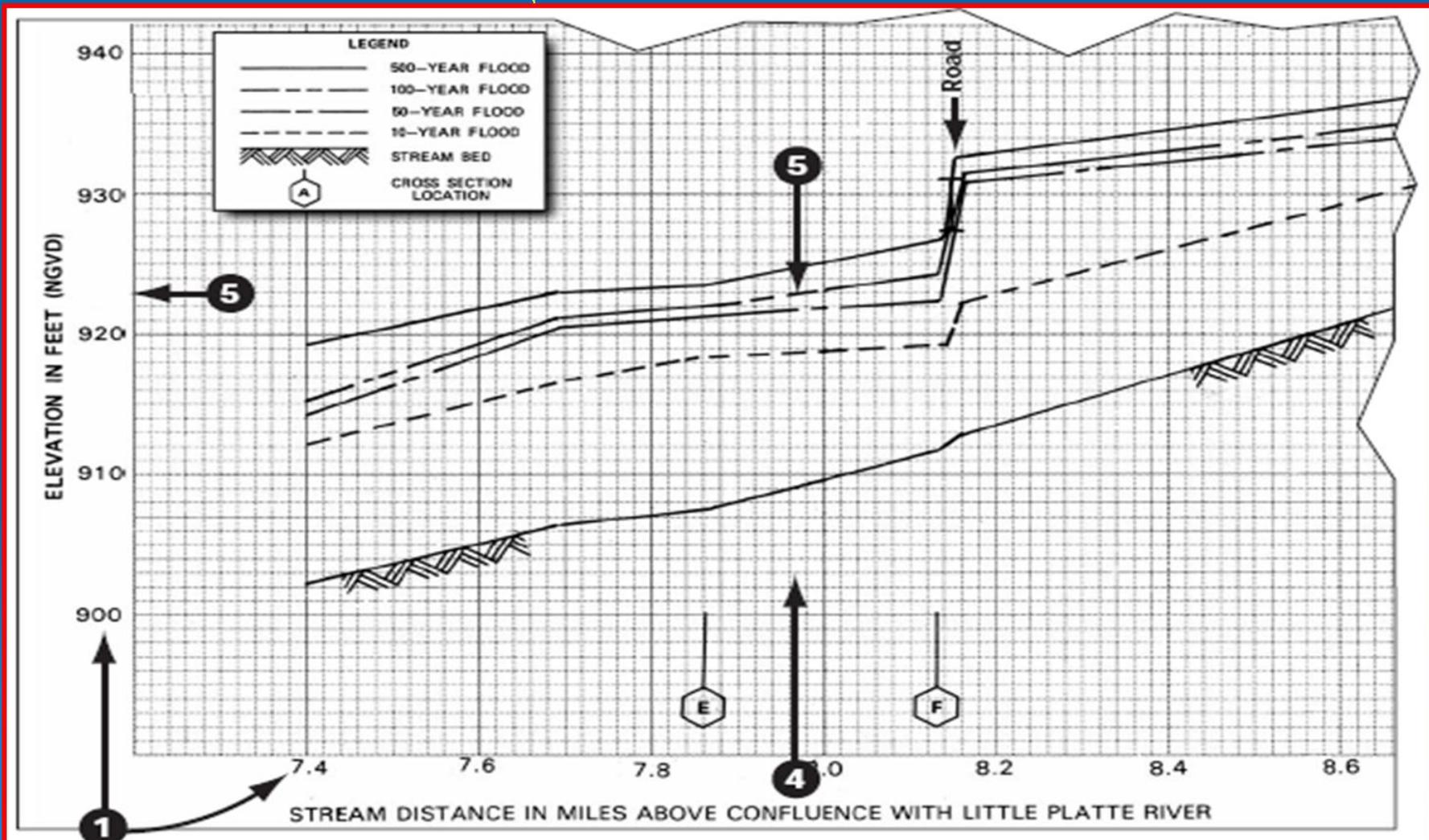
Components of a Flood Insurance Study (FIS)

Narrative

- Appraises a community's flood problems
- Establishes insurance risk zones
- Community flood history
- Study information
- Plots floodplain boundaries
- Flood elevation profiles
- Provides data to delineate floodways in some communities

Components of a Flood Insurance Study (FIS)

Flood Profile



Floodway Data Table

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Green River								
A	0	188	1,691	6.9	267.5	257.3 ²	257.4 ²	0.1
B	380	161	1,539	7.6	267.5	258.0 ²	258.1 ²	0.1
C	480	161	1,550	7.6	267.5	258.1 ²	258.2 ²	0.1
D	980	155	1,143	10.3	267.5	259.6 ²	259.7 ²	0.1
E	1,560	319	2,103	5.6	267.5	262.9 ²	262.9 ²	0.0
F	1,770	288	2,345	5.0	267.5	265.2 ²	265.2 ²	0.0
G	2,270	73	849	13.8	267.5	265.3 ²	265.3 ²	0.0
H	2,770	119	1,564	7.5	267.5	267.5	268.5	1.0
I	2,940	169	1,971	6.0	267.5	267.5	268.5	1.0
J	3,440	170	1,802	6.5	268.1	268.1	269.1	1.0
K	4,540	207	2,164	5.4	270.1	270.1	270.7	0.6
L	4,840	227	1,839	6.4	270.3	270.3	271.0	0.7
M	5,370	113	837	14.0	271.2	271.2	271.5	0.3

¹ Feet Above Confluence With Lake Highwater

² Elevation Computed Without Consideration of Backwater From Lake Highwater

TABLE	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOODWAY DATA
1	City of Floodville, CA	GREEN RIVER

Map Changes



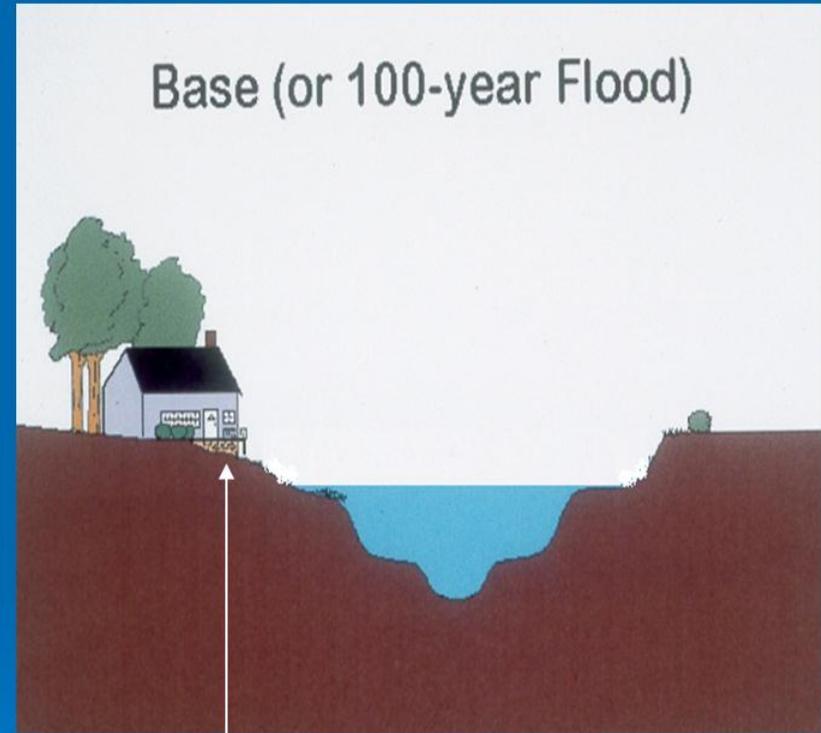
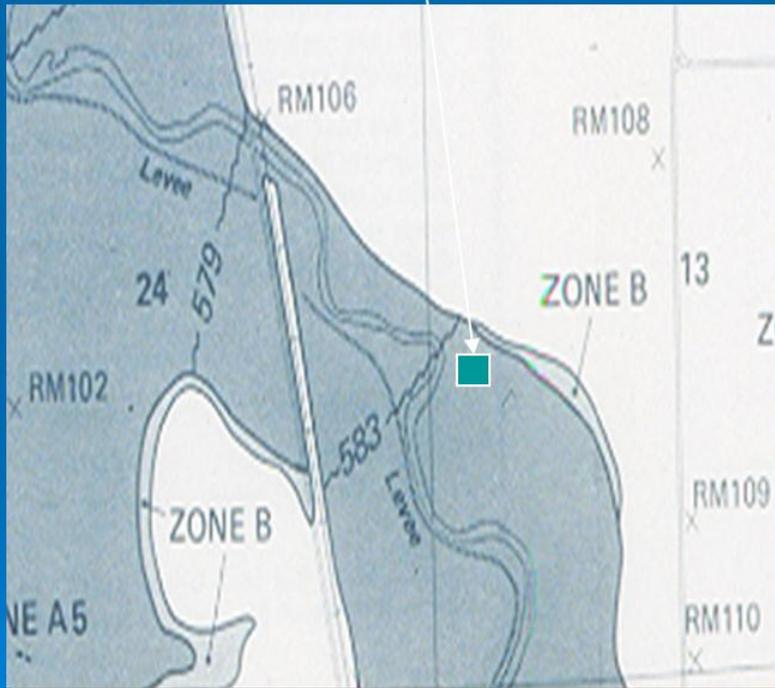
Sometimes the maps are just plain wrong!

Sometimes the floodplains are modified.

There is a process to correct them

Letter of Map Amendment (LOMA)

House is shown in the floodplain



But NATURAL ground elevations prove it to be higher than the flood elevation

Letter of Map Amendment (LOMA)

Situation:

Structure is located on NATURALLY
high ground

Information needed by FEMA:

Completed MT-1 Form 1 (or MT-EZ)

Cost: “free”

MT-EZ

Insurance Program (NFIP) map showing the area in an SFHA is considered natural grade.

LOMA:

A letter from FEMA stating that an existing structure or parcel of land that has not been elevated by fill would not be inundated by the base flood.

A – This section may be completed by the property owner or by the property owner's agent.

1. Has fill been placed on your property?

No Yes – If Yes, STOP!! – You must complete the MT-1 application forms; visit

http://www.fema.gov/firm/dl_mt-1.shtm

or call the FEMA Map Assistance Center toll free: (877-FEMA MAP) (877-336-2627)

2. Legal description of Property (Lot, Block, Subdivision) and street address of the Property (if different from mailing address):

3. Are you requesting that the flood zone designation be removed from (check one):

Your entire legally recorded property?

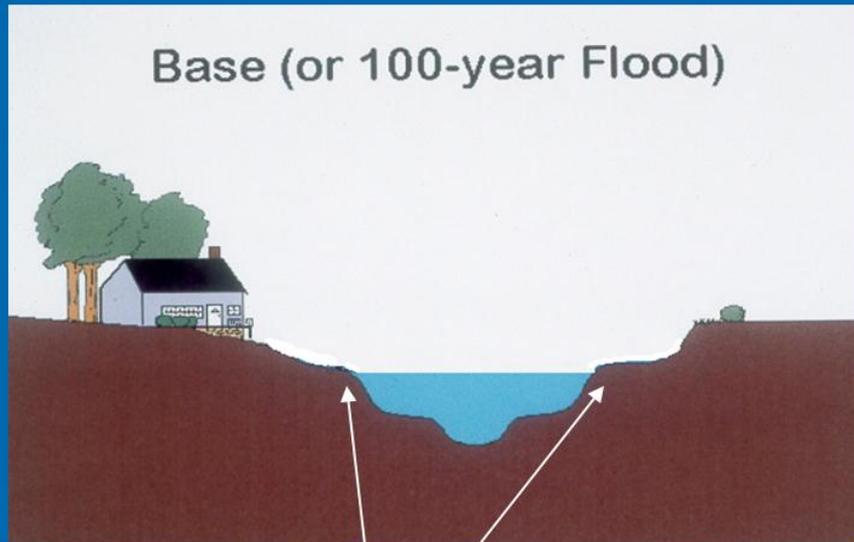
A portion of your legally recorded property? (a metes and bounds description and map of the area to be removed, certified by a registered professional engineer or licensed land surveyor are required)

A structure on your property? What is the date of construction?

The E-LOMA

- Internet based system to process simple LOMA requests
- Only available to licensed land surveyors and professional engineers
- Allows determinations to be printed out locally by the user
- Random audits to be completed to verify accurate determinations

Letter of Map Revision (LOMR)



Floodplain as shown
on the floodplain map

New floodplain based on
PHYSICAL modification



Letter of Map Revision (LOMR)

Situation:

Physical changes to the floodplain, the floodway, or flood elevations.

Information needed by FEMA:

Detailed engineering and MT-2
Form

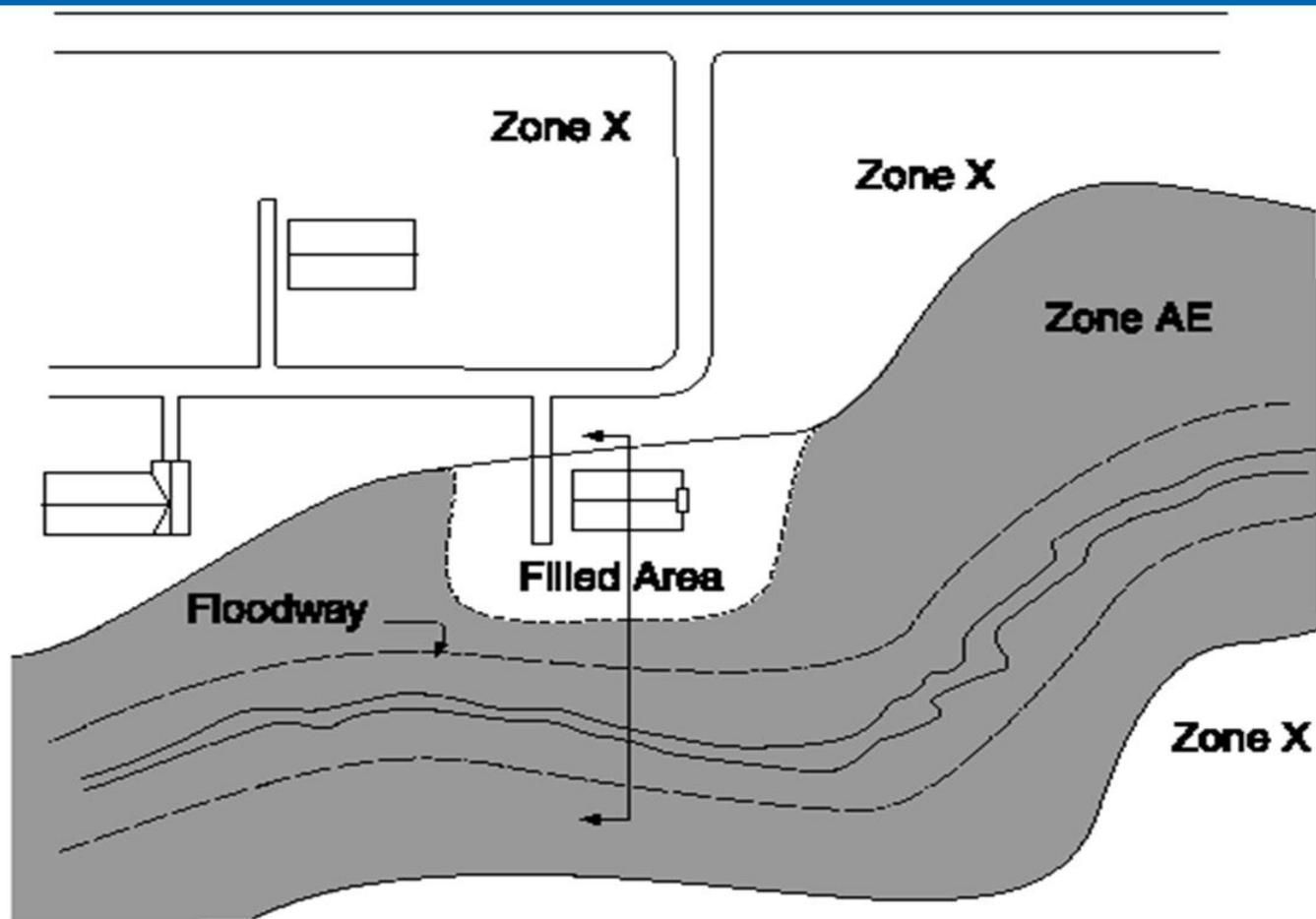
Cost: not cheap

Conditional Letter of Map Revision CLOMR-F

A letter from FEMA stating that a proposed development project would not be inundated by the 1% chance flood if built as proposed.

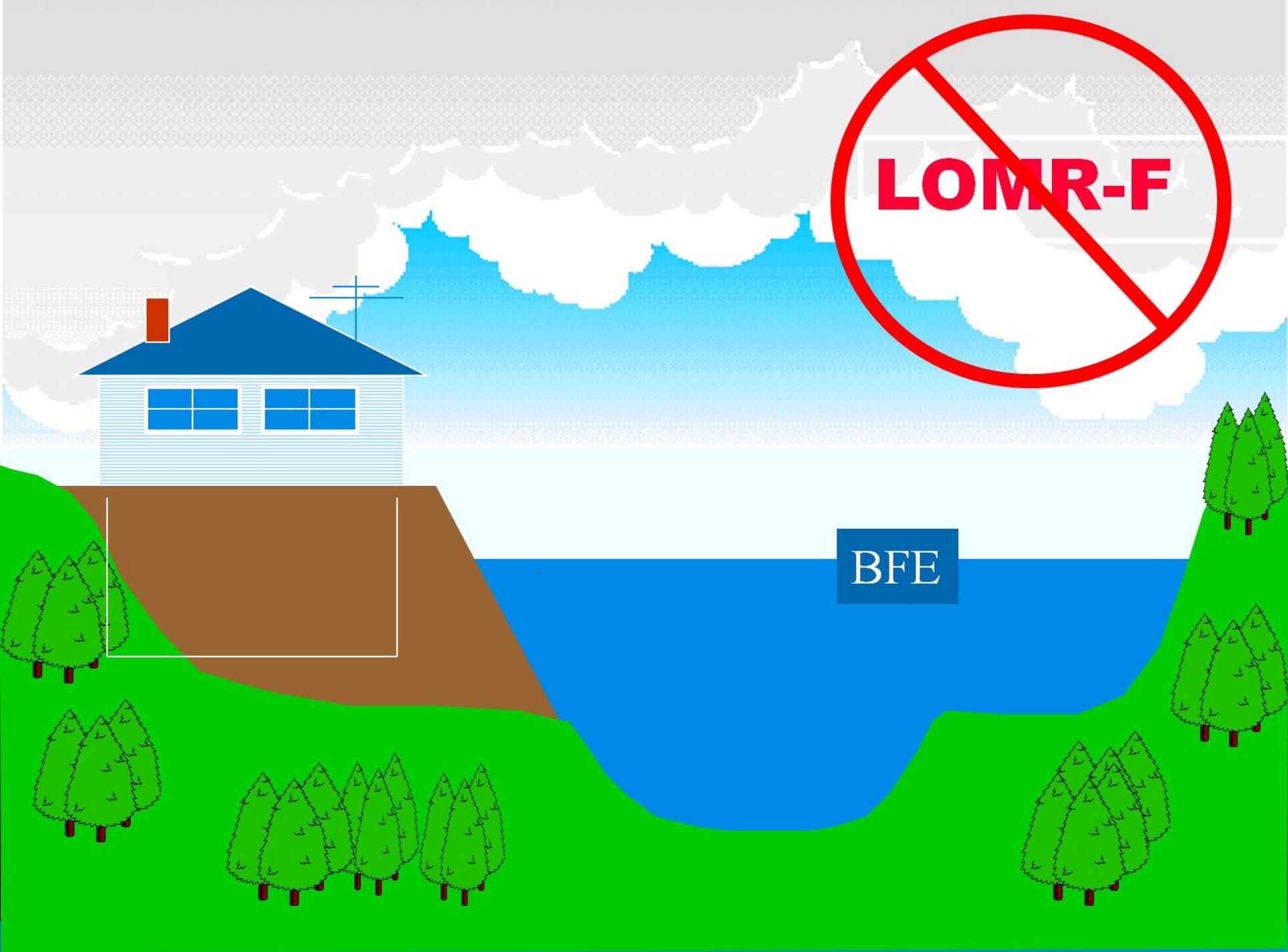


LOMR-F

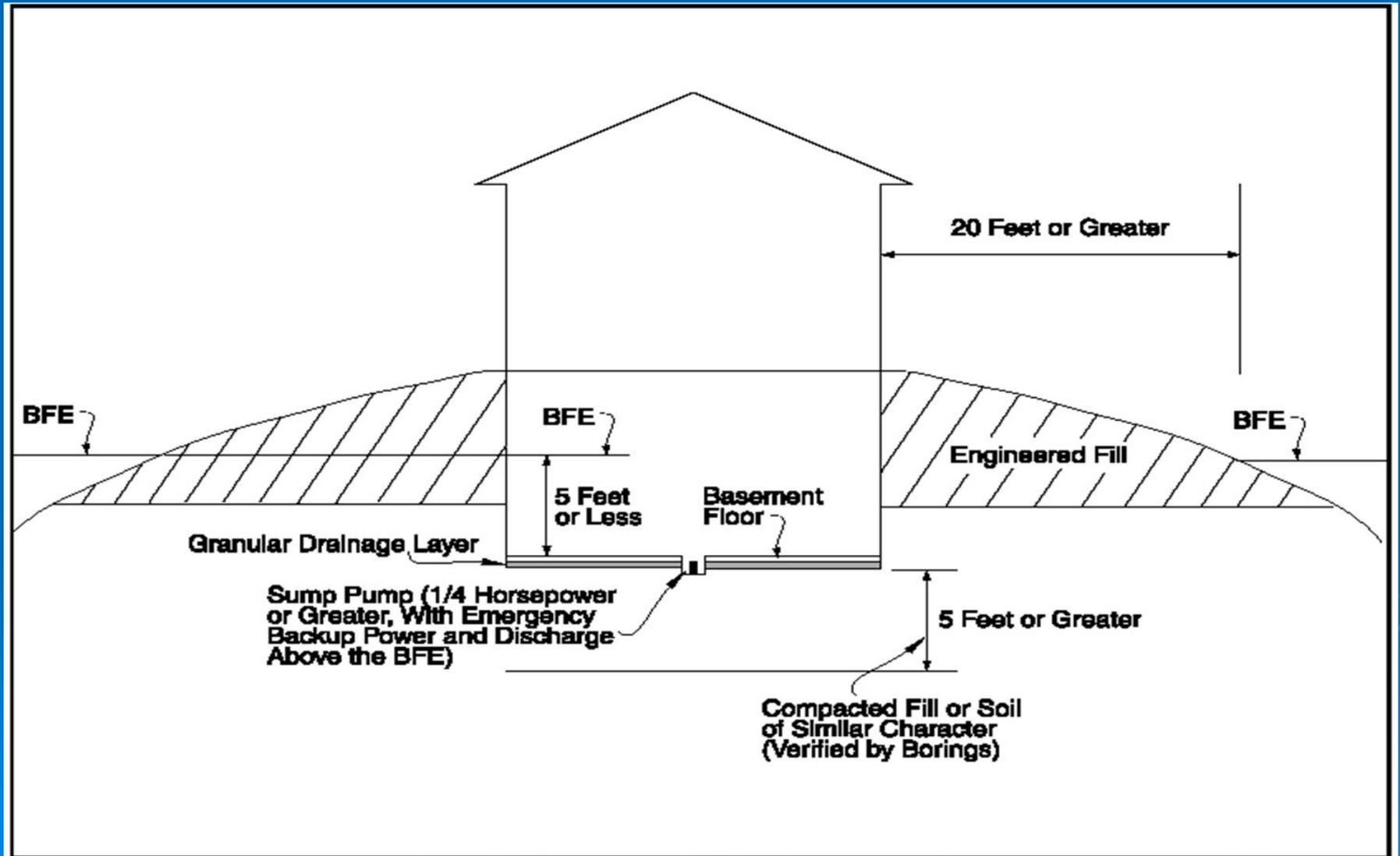


LOMR-F

BFE



Technical Bulletin 10-01



LOMR-F?

With a basement below BFE??

NOT in Rock Island County!

NOT while I've got a say!



LOMC

TOLL-FREE HOTLINE

1-877-FEMA MAP (366-2627)

- Inundated with calls about changing the maps from residents, insurance companies, or appraisers, etc?
- Need to know the status of a current LOMA/R request?

Current FEMA LOMC Fee Schedule

Current Fee Schedule for Map Change Requests

The current fee schedule for conditional and final map change requests is provided below.

REQUESTS FOR SINGLE-LOT, SINGLE-STRUCTURE MAP CHANGE	FEE	COMMENT
Single-Lot or Single-Structure LOMA	Free	N/A
Single-Lot/Single-Structure CLOMA and CLOMR-F	\$500	Flat Fee
Single-Lot/Single-Structure LOMR-F	\$425	Flat Fee
Single-Lot/Single-Structure LOMR-F Based on As-Built Information (CLOMR-F previously issued by FEMA)	\$325	Flat Fee

REQUESTS FOR MULTIPLE-LOT, /MULTIPLE-STRUCTURE MAP CHANGES	FEE	COMMENT
Multiple-Lot/Multiple-Structure LOMA	Free	N/A
Multiple-Lot/Multiple-Structure CLOMA	\$700	Flat Fee
Multiple-Lot/Multiple-Structure CLOMR-F and LOMR-F	\$800	Flat Fee
Multiple-Lot/Multiple-Structure LOMR-F Based on As-Built Information (CLOMR-F previously issued by FEMA)	\$700	Flat Fee

REQUESTS FOR MAP CHANGES REQUIRING SPECIAL TECHNICAL REVIEW	FEE	COMMENT
CLOMR Based on New Hydrology, Bridge, Culvert, Channel, or Combination Thereof	\$4,400	Flat Fee
CLOMR Based on Levee, Berm, or Other Structural Measures	\$6,050	Flat Fee
LOMR/PMR Based on Bridge, Culvert, Channel, or Combination Thereof	\$5,300	Flat Fee
LOMR/PMR Based on Levee, Berm, or Other Structural Measures	\$7,150	Flat Fee
LOMR Based on As-Built Information (CLOMR previously issued by FEMA)	\$5,000	Flat Fee
LOMR/PMR Based Solely on Submission of More Detailed Data	Free	N/A
LOMR/CLOMR Based on Structural Measures on Alluvial Fans	\$5,600	Initial fee plus \$60 per hour. Requester will be invoiced for remaining balance

Payment must be received before services will be rendered. Checks, money orders, and credit cards are accepted. Checks and money orders must be made payable, in U.S. funds, to the National Flood Insurance Program.

University of Illinois LOMC Contacts

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217-333-2059

hanstad@illinois.gov

H & H Inquiries:

Brian Challe

217-244-3522

b.challe@illinois.edu

Levees In Illinois

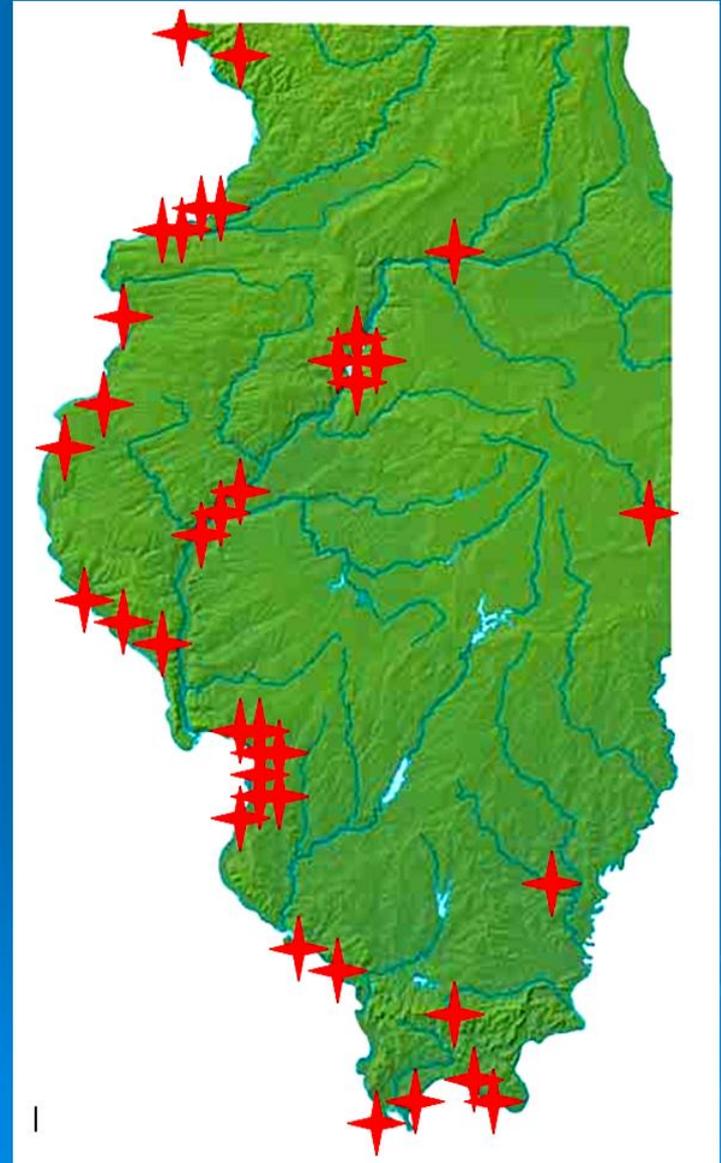


Failures somewhere in Illinois
with every major flood!

“Certified” Levees In Illinois

Alorton
Alton
Andalusia
Beardstown
Bethalto
Brooklyn
Brookport
Cahokia
Cairo
Caseyville
Centreville
Collinsville
Creve Coeur
Dupo
East Alton
EastCarondelet
East Dubuque
East Moline
East Peoria
East St. Louis
Fairmont City
Fulton
Galena
Golconda
Granite City
Gulfport
Hartford

Harrisburg
Hull
Karnak
Kaskaskia
Keithsburg
Madison
Meredosia
Milan
Moline
Mound City
Mt. Carmel
North Pekin
Oquawka
Ottawa
Peoria
Pleasant Hill
Pontoon Beach
Prarie du Rocher
Quincy
Rock Island
Rosiclare
Roxana
Sauget
Silvis
South Roxana
Venice
Washington Park
Wood River



yellow font = levee certification in question

What is a FEMA “Certified Levee”?

- Freeboard (3 ft. ++)
- Closures
- Embankment protection
- Foundation stability
- Settlement
- Interior Drainage
- Operation & Maintenance plan



■ In lieu of these structural requirements, a Federal agency with responsibility for levee design may certify that the levee meets these standards.

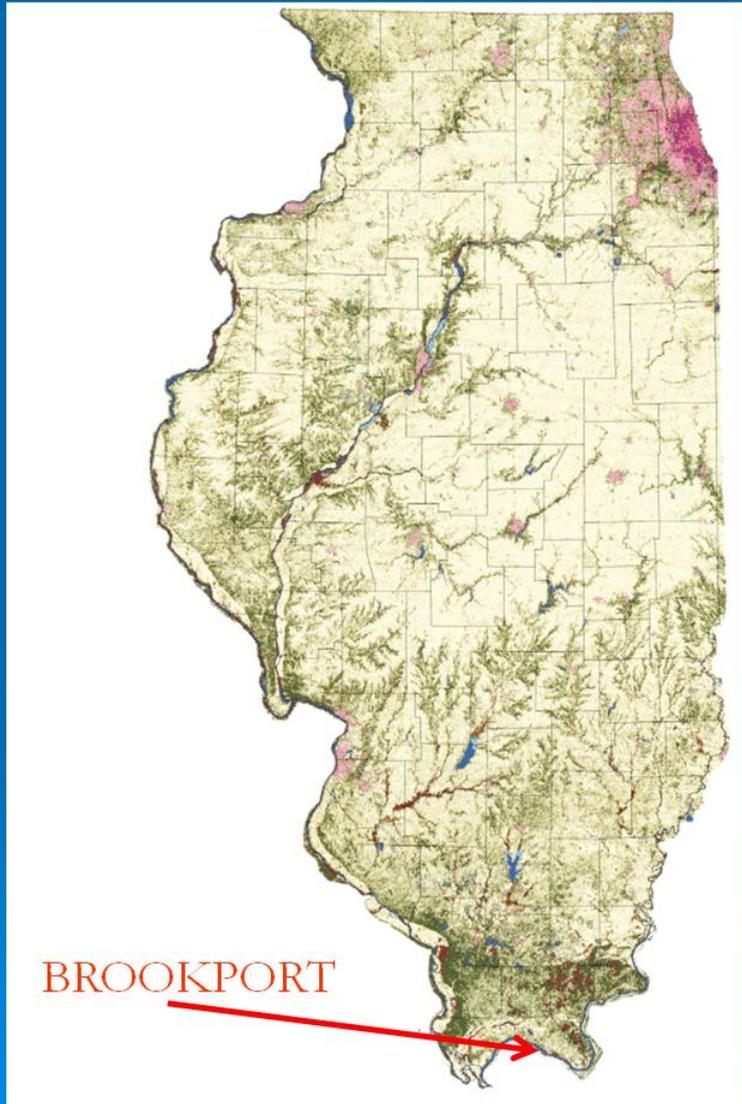
FEMA Levee Responsibilities

- Determine and establish appropriate risk zone designations in areas behind levees
- Reflect those determinations on maps
- Establish mapping standards (design, operations, and maintenance criteria) to ACCREDIT levees that provide at least 1-percent-annual-chance flood protection
- FEMA DOES NOT certify levees

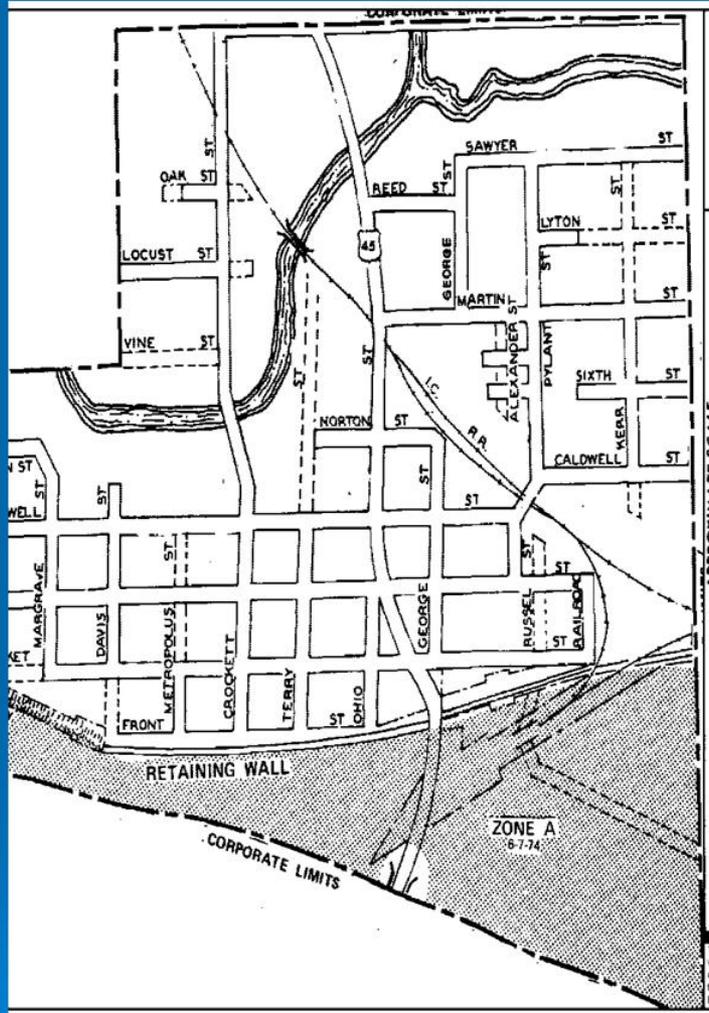
Community/Levee owners Responsibilities

If a community or levee owner wants the floodplain maps to recognize protection from the 100-year flood, the levee owner must provide the documentation to show that the levee meets design, construction, and operation & maintenance standards for 100-year flood protection.

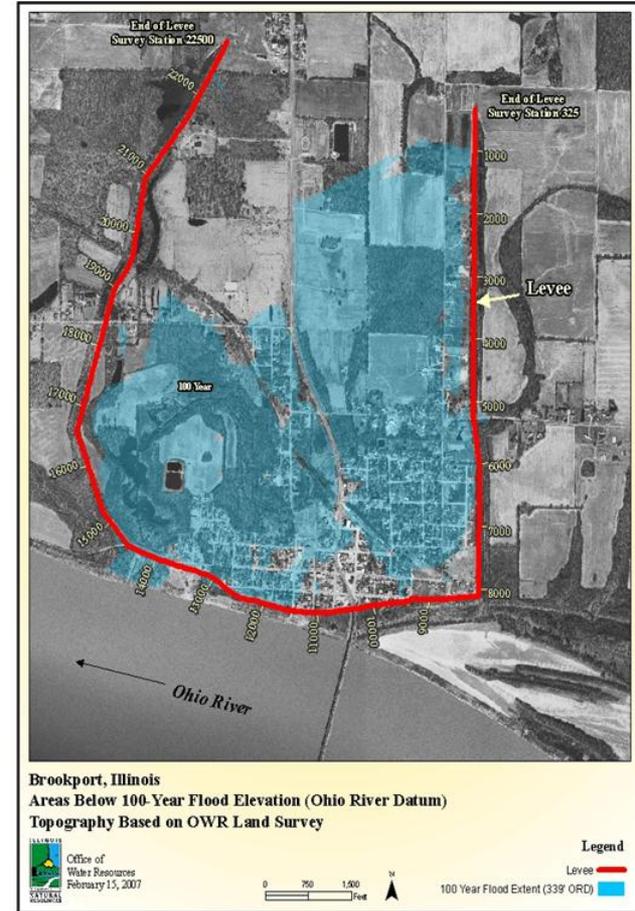
Brookport, Illinois Levee



Brookport, Illinois Maps



**Brookport, Illinois
Flood Insurance Rate Map
April 1976**

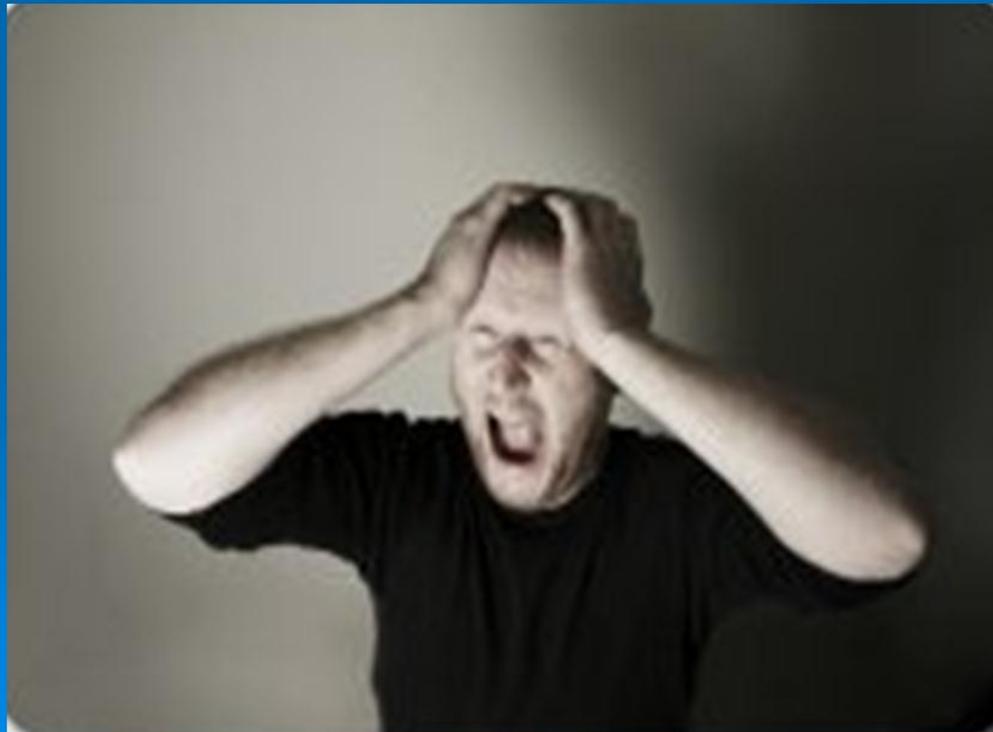


**Brookport, Illinois
IDNR Residual Risk Map
February 2007**

Residual Risk Awareness ?

~million residents
behind levees.....

~1% are covered by a
Flood Insurance Policy!!!!



IL DNR-OWR PERMITTING



IDNR/OWR (Northeast)

2050 West Stearns Road

Bartlett, IL 60103

(847) 608-3100

IDNR/OWR (Downstate)

One Natural Resources Way

Springfield, IL 62702

217-782-3863

State Jurisdiction

Floodways

Dams

Public Waters

12 8:56 AM

IDNR/OWR Permit Programs

**Construction in Floodways of Rivers, Lakes and Streams:
Part 3700 Rules**

Regulations for Dam Construction : Part 3702 Rules

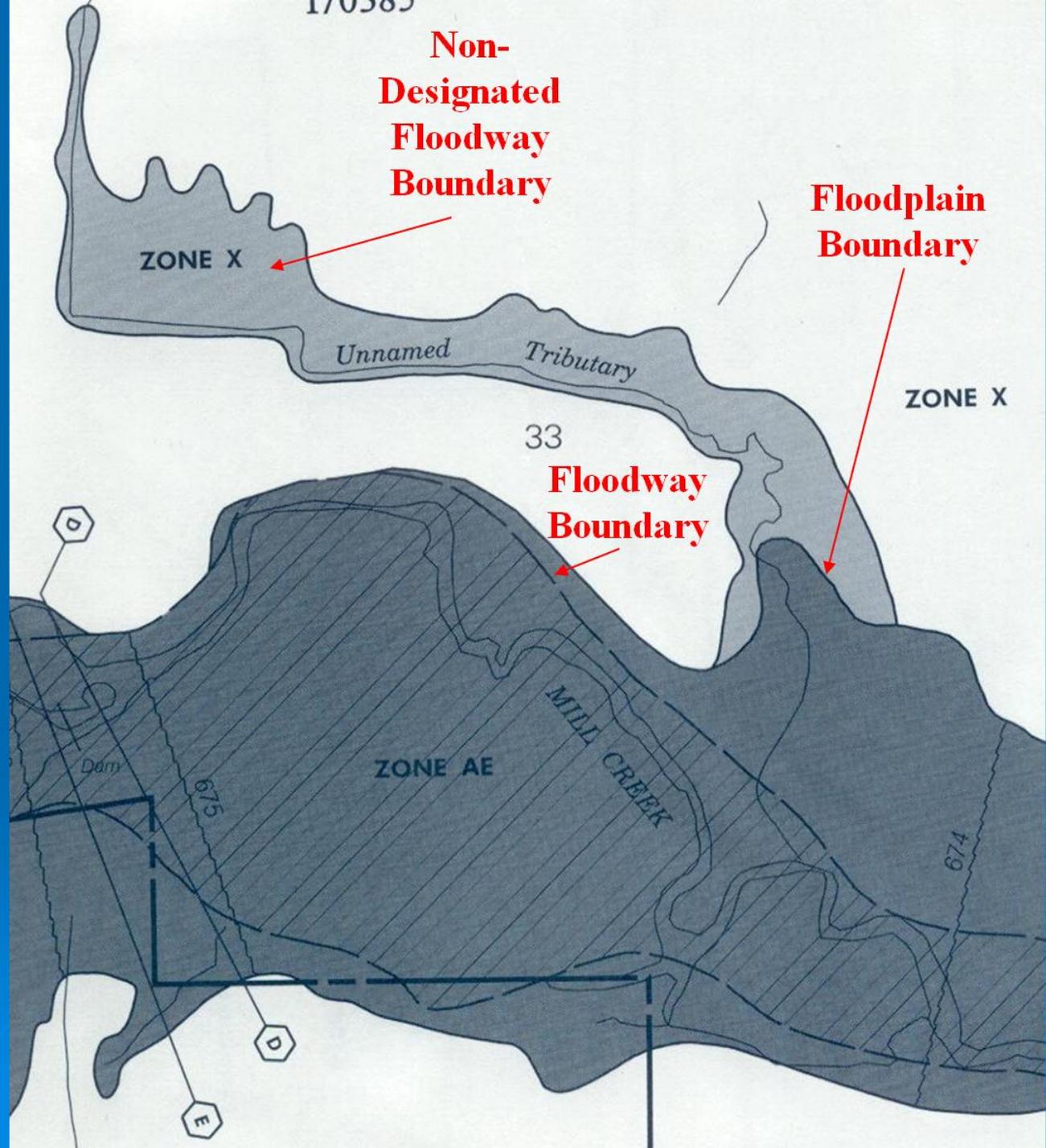
Regulations of Public Waters: Part 3704 Rules

**Floodway Construction in Northeastern Illinois:
Part 3708 Rules**

Floodway Encroachments



FIRM





State Permit
required in a:
Mapped Floodway

Or



Floodplain with no
identified Floodway

IDNR/OWR Floodway Permit Program

Part 3700 Rules

Construction in the Floodways of Rivers, Lakes and Streams

The IDNR/OWR exercises jurisdiction over **construction** in the **floodway** of watercourses which have a drainage area of:

1 square mile or more (≈ 640 acres) in an urban area or

10 square miles or more (≈ 6400 acres) in a rural area.

If the stream DOES NOT meet these thresholds.

DON'T EVEN SEND IT IN.

IDNR/OWR Floodway Permit Program (cont.)

Two types of Permits are offered:

1. Statewide Permit

Statewide Permits are offered for pre-approved projects which are considered minor projects which are permissible per our Part 3700 rules.

Examples: Bank Stabilization, Minor Maintenance Dredging

2. Formal Permit

Formal Permits are permits which are issued for significant-type projects which do not meet a Statewide Permit. These projects generally require an extensive project review of engineering data.

Examples: New Bridges or Culverts, New Levee Construction

IDNR/OWR Floodway Permit Program (cont.)

Statewide Permits

- SWP 2 - Bridge & Culvert Structures in Rural Areas on Streams Draining Less than 25 square miles.
- SWP 4 - Aerial Utility Crossings
- SWP 5 - Minor Boat Docks
- SWP 6 - Minor Non-Obstructive Floodway Construction
- SWP 7 - Outfalls
- SWP 8 - Underground Pipeline and Utility Crossings
- SWP 9 - Minor Shoreline, Stream Bank, and Channel Protection activities**
- SWP 10 - Accessory Structures and Additions to Existing Residential Structures
- SWP 11 - Minor Maintenance Dredging**
- SWP 12 - Bridge and Culvert Replacement Structures
- SWP 13 - Temporary Construction Activities
- SWP 14 - Special Uses of Public Waters

Can be found at <http://dnr.state.il.us/owr/resman/apform.htm>

Statewide Permit #9 Example

- No Buicks or Maytags
- Less than 1000 feet
- Sized or anchored to resist flows
- No higher than the existing bank
- Maintain x-section
- Minimize erosion

IDNR/OWR Floodway Permit Program

Part 3708 Rules Floodway Construction in Northeastern Illinois

The IDNR/OWR exercises jurisdiction over **construction** in the **regulatory floodway** of watercourses in Cook, DuPage, Kane, Lake, McHenry and Will counties, excluding the City of Chicago.

IDNR/OWR Floodway Permit Program (cont.)

Two types of Permits are offered:

1. Regional Permit

Regional Permits are offered for pre-approved projects which are considered minor projects which are permissible per our Part 3708 rules.

Examples: Bank Stabilization, Utilities, Boat Docks

2. Formal Permit

Formal Permits are permits which are issued for significant-type projects which do not meet a Statewide Permit. These projects generally require an extensive project review of engineering data.

Examples: New Bridges or Culverts, New Levee Construction

Regional Permits

RP 1-2 Authorize minor highway improvements by the Illinois Department of Transportation

RP 3 Authorizes underground and overhead utilities, storm and sanitary sewer outfalls, sidewalks, patios, athletic fields, playground equipment and streambank protection activities

Can be found at <http://dnr.state.il.us/waterresources>

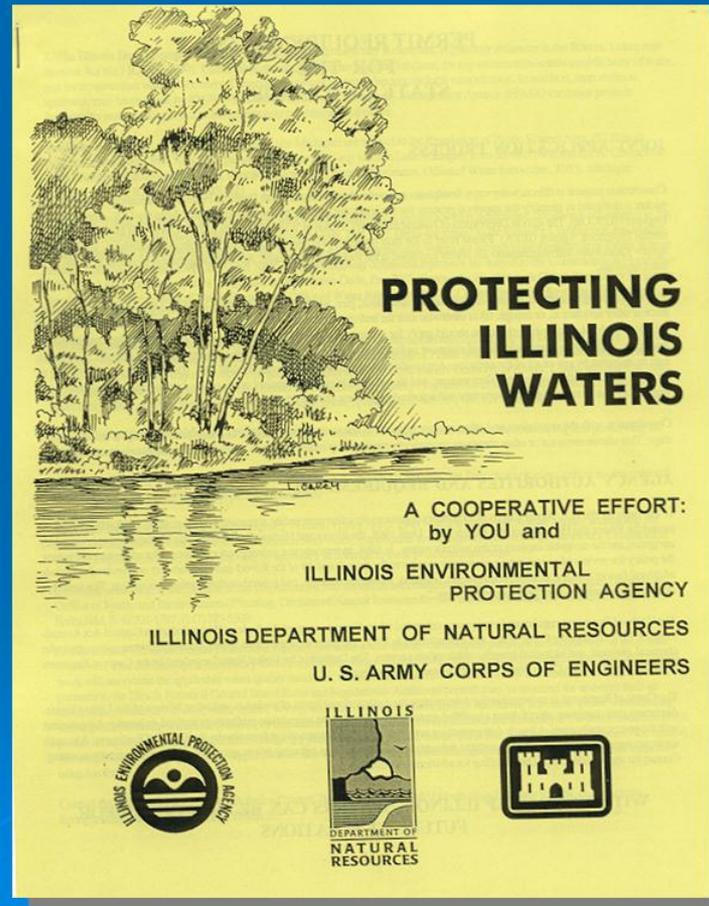
Regional and Statewide Permits

- “Blanket” pre-authorization of minor projects.
 - Application submittal not needed.
 - Letter, drawings, etc. not needed.
 - No IDNR-OWR record keeping.
- 

IDNR/OWR Permit Program Process

Joint Application Form

Complete and Submit Joint Application Form



When to Submit...

- An application submittal is only needed for jurisdictional construction activities that require a formal or general permit.

When NOT to Submit...

- An application submittal is not needed for construction activities that:
 - are not jurisdictional.
 - are authorized by a regional or statewide permit.
 - are an exempted activity per administrative rules.
 - can be permitted by a delegated community.
 - can be authorized by IDOT/DOH per MOA.

What to Submit...

- Permit application package that is tailored to obtaining an IDNR-OWR permit.
 - One size does not fit all.
- Properly completed IDNR-OWR copy of application form.

JOINT APPLICATION FORM

1. Application Number (to be assigned by Agency) 1	2. Date 2 Day _____ Month _____ Year _____	3. For agency use only (Date Received)										
4. Name and address of applicant 3	5. Name, address, and title of authorized agent 4											
Telephone no. during business hours A/C () _____		Telephone no. during business hours A/C () _____										
6. Project Description and Remarks: Describe in detail the proposed activity, its purpose, and intended use. Also indicate the drainage area at the watershed to the downstream limit. Use attachments if needed. 5												
7. Names, addresses, and telephone numbers of all adjoining and potentially affected property owners, including the owner of the subject property if different from applicant.												
8. Location of activity	Legal Description: _____ 6 _____ 1/4 Sec. _____ Twp. _____ Rge. _____ P.M. UTM (Universal Transverse Mercator): _____ If available Zone North East											
Name of waterway at location of the activity _____ Address: _____ Street, road, or other descriptive location _____ In or near city or town _____ County _____ State _____ Zip Code _____		Name of Local Governing Community 7 _____										
9. Date activity is proposed to commence _____ Estimated Time of Construction _____												
10. Is any portion of the activity for which authorization is sought now complete? Yes _____ No _____ If answer is "Yes" give reasons in item 6. Month and Year the activity was completed _____ Indicate the existing work on drawings.												
11. List all approvals or certifications required by other federal, interstate, state, or local agencies for any structures, construction, discharges, deposits, or other activities described in this application. If this form is being used for concurrent application to the Corps of Engineers, Illinois Department of Natural Resources, and Illinois Environmental Protection Agency, these agencies need not be listed. <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Issuing Agency</th> <th style="text-align: left;">Type Approval</th> <th style="text-align: left;">Identification No.</th> <th style="text-align: left;">Date of Application</th> <th style="text-align: left;">Date of Approval</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval					
Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval								
12. Has any agency desired approval for the activity described herein or for any activity directly related to the activity described herein? Yes _____ No _____ (If "Yes", explain in item 6.)												
13. Application is hereby made for authorizations of the activities described herein. I certify that I am familiar with information contained in the application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.		Signature of Applicant or Authorized Agent 8 _____ Typed or Printed Name of Applicant or Authorized Agent _____										

Application Form

1. Application number.
2. Date (day/month/year).
3. Applicant's name with contact person.
4. Agent's name.
5. Brief project description.
6. Section, township, range.
7. Name of local governing community.
8. Signature.

Narrative

- Recommended for most projects.
- Essential for complex projects.
- Detailed project description.
- Explain how project meets applicable rules.
- Include support information for computations and modeling.

Location Map

- Show project site.
- Include road names.
- Show stream with name.
- Show/name nearby municipalities.
- Include scale.
- North arrow.

FIRM/FBFM

- Show project site.
- Include road names.
- Show stream name.
- Include scale.
- North arrow.
- go to: <http://www.msc.fema.gov/> and click on "The FEMA Flood Map Store"

Site Plan

- Show property lines.
 - Show stream channel (if located on subject property).
 - Show regulatory floodway limits as scaled from FIRM/FBFM, or non-designated floodway limits.
 - Include scale.
 - North arrow.
- 

Grading Plan

- Full-size.
- Existing and proposed contour lines clearly shown and labeled.
- Proposed grades must “tie in” with existing grades on the plans.
- Reference marks and elevation datum.
- Show regulatory floodway limits as scaled from FIRM/FBFM or non-designated floodway limits.

Plotted Cross Sections

- Existing and proposed grades on same plot.
- Must match grading plan.
- Properly labeled.

Engineering Report

- Not required, but usually very helpful.
- Do not bury application form in report.
- Include narrative, maps, summary tables, computations, models, photographs, other support information.

Design Drawings

- Plan, elevation, cross-section views of bridges, culverts and other structures.
- Size, length, width, type of structure.

Do Not Submit...

- More than one copy of the application form, engineering report, etc., however, 2 copies of drawings are preferred.
- Corps of Engineers, IEPA, and Applicant's copy of the application form.
- Wetland reports needed by COE.
- Full sets of engineering drawings.
- Soil boring reports.*
- Contract documents.*

* *May be needed for a dam safety submittal.*

Hydraulic Modeling

- Not always needed.
- Do not include entire watershed.
- Work map showing cross-section locations with labels.
- Include 100 year flood event and other events, such as 10 year and 50 year flood events.

Delegation

- Voluntary program.
- Good standing in NFIP.
- Up-to-date ordinance.
- Professional Engineer.

Delegation

- Regular
 - 57 communities
- Countywide
 - Lake & DuPage Counties

Regular Delegation

- Minor and some major projects in regulatory floodways.
- IDNR-OWR approval needed for bridge and culvert hydraulics.
- IDNR-OWR permit needed for jurisdictional dams, projects in public waters, and community projects.

Countywide Delegation

(6-County area only)

- Minor and major projects.
- IDNR-OWR approval not needed for bridge and culvert hydraulics.
- IDNR-OWR permit needed for jurisdictional dams, projects in public waters, and LCSMC and DuPage County EDP projects.

Jurisdiction Dam Safety

Construction of a new dam
(Class I, Class II, or jurisdictional Class III)

Major Modification to an existing or new dam
(Major Structural Change)

Breach or remove an existing or new dam

An existing dam is defined as a dam which was constructed prior to September 2, 1980.

Jurisdiction

- All Class I and Class II dams require a permit.
- Certain Class III dams require a permit.



Class I High Hazard Dam

Part 3702 Rules



Class II Dam with Pedestrian Bridge
Part 3702 Rules

A photograph of a dam with water flowing over it, surrounded by tall grasses and bare trees. The dam is a concrete structure with a metal railing on the left side. The water is flowing from left to right over the dam. The background shows a line of bare trees under a clear sky. The foreground is filled with tall, dry grasses.

Class III Low Hazard Dam
Part 3702 Rules

Public Water Rules

REGULATION OF PUBLIC WATERS

(ILL. ADM CODE PART 3704)

- Regional and Statewide Permits may be applicable.
- No delegation.





E-TOWN

RESTAURANT

10000 E. 1000

Public Notices

Needed for:

- Projects that involve revisions to the regulatory floodway or flood profile.
- Projects in public waters that are not authorized by a regional or statewide permit.
- Formal permits for dams.

Public Notices

- Names and addresses on mailing labels.
- Black and white annotated floodway maps.
- Joint public notice with COE.
- Twenty-one days.

IDNR-OWR Offices

- **Northeastern Illinois**
Regulatory Programs Section
2050 W. Stearns Road
Bartlett, IL 60103

Phone 847/608-3100,
Extension 2025
Fax 847/931-2037

- **Downstate Illinois**
Regulatory Programs Section
One Natural Resource Way
Springfield, IL 62702-1271

Phone 217/782-3863
Fax 217/785-5014

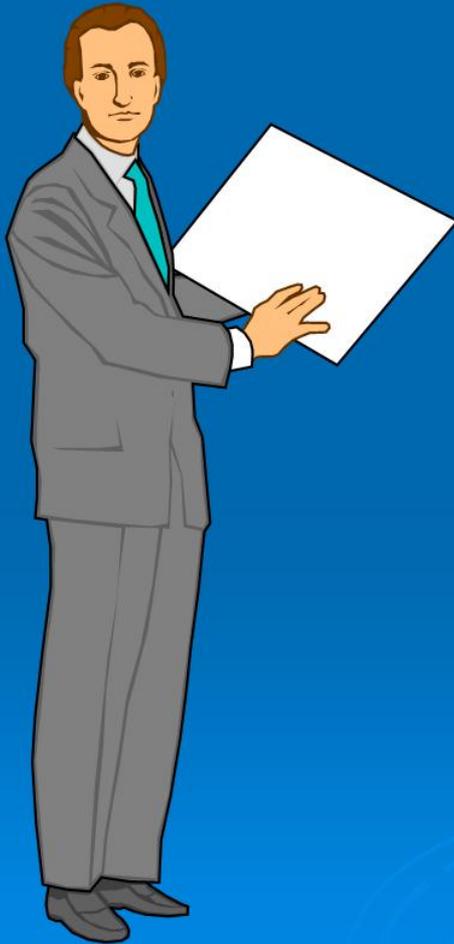
- **Web Site: <http://dnr.state.il.us/owr>**



Questions?



LOCAL PERMIT RESPONSIBILITIES



To participate in the National Flood Insurance Program (NFIP) certain duties are required

The Nine Fundamental Duties

- ✓ Adopt and Enforce a floodplain ordinance
- ✓ Require permits for all floodplain development
- ✓ Assure that buildings are reasonably safe from flooding
- ✓ Require new or replacement homes to be elevated above BFE
- ✓ Require other buildings to be elevated or floodproofed
- ✓ Conduct field inspections and cite violations
- ✓ Require Elevation Certificates to document compliance
- ✓ Carefully consider requests for variances
- ✓ Maintain accuracy of maps. Notify FEMA of changes



Makes Available:

- flood insurance
- disaster assistance
- grants and loans

In Exchange For:

- Local floodplain ordinance and permits which:
- Prevent increased damages
- Protect new buildings
- Keep flooding from getting worse



Development is.....

- Construction of new buildings
- Addition or substantial improvements to existing buildings
- Manufactured (mobile) homes and RVs
- Subdivisions or commercial developments
- Storage of materials
- Fill, grading, excavating
- Fences, culverts, bridges, roads
- And ANYTHING else that changes the floodplain



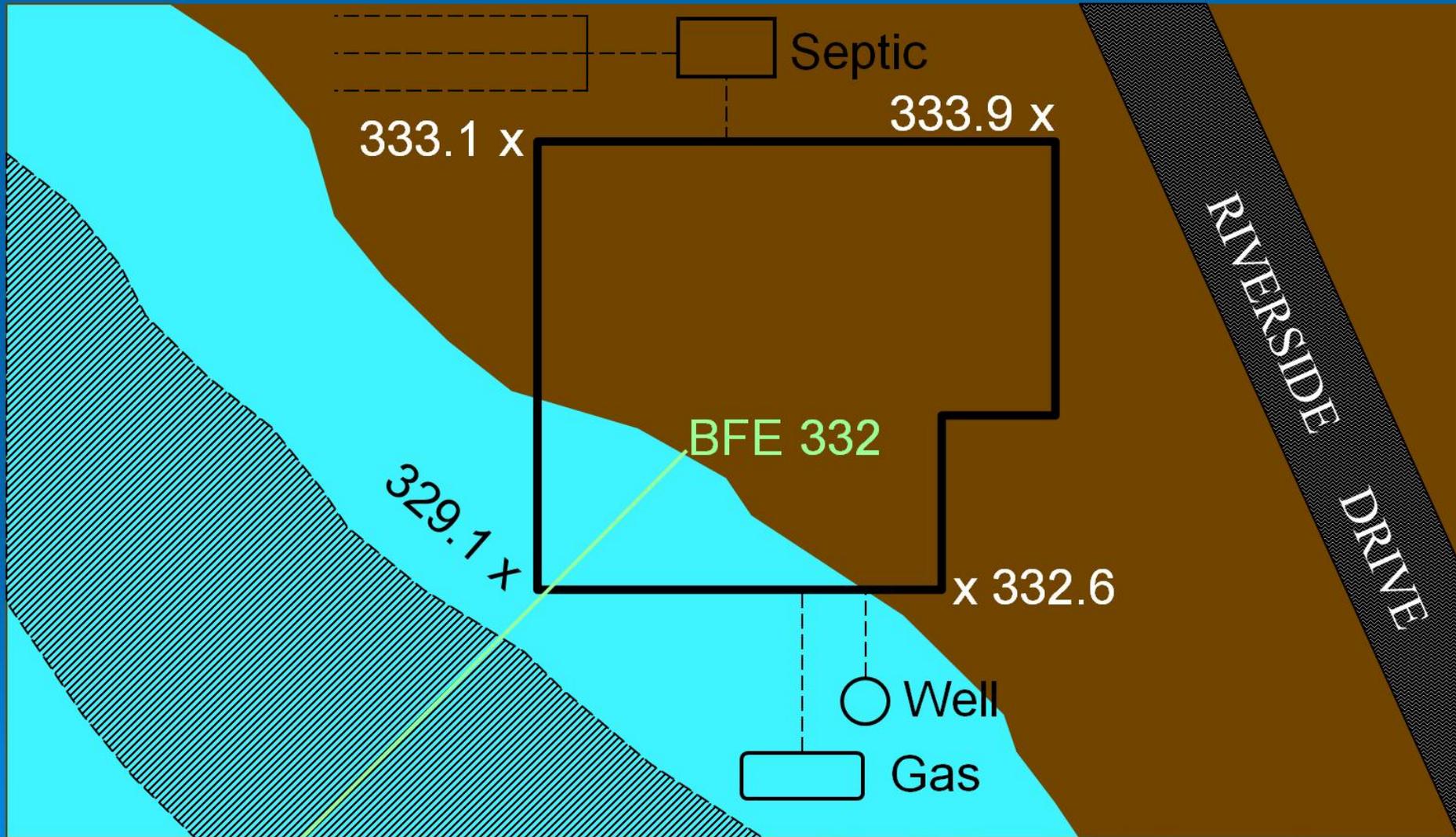
Building Protection Standards

Methods to Elevate Buildings in an A Zone

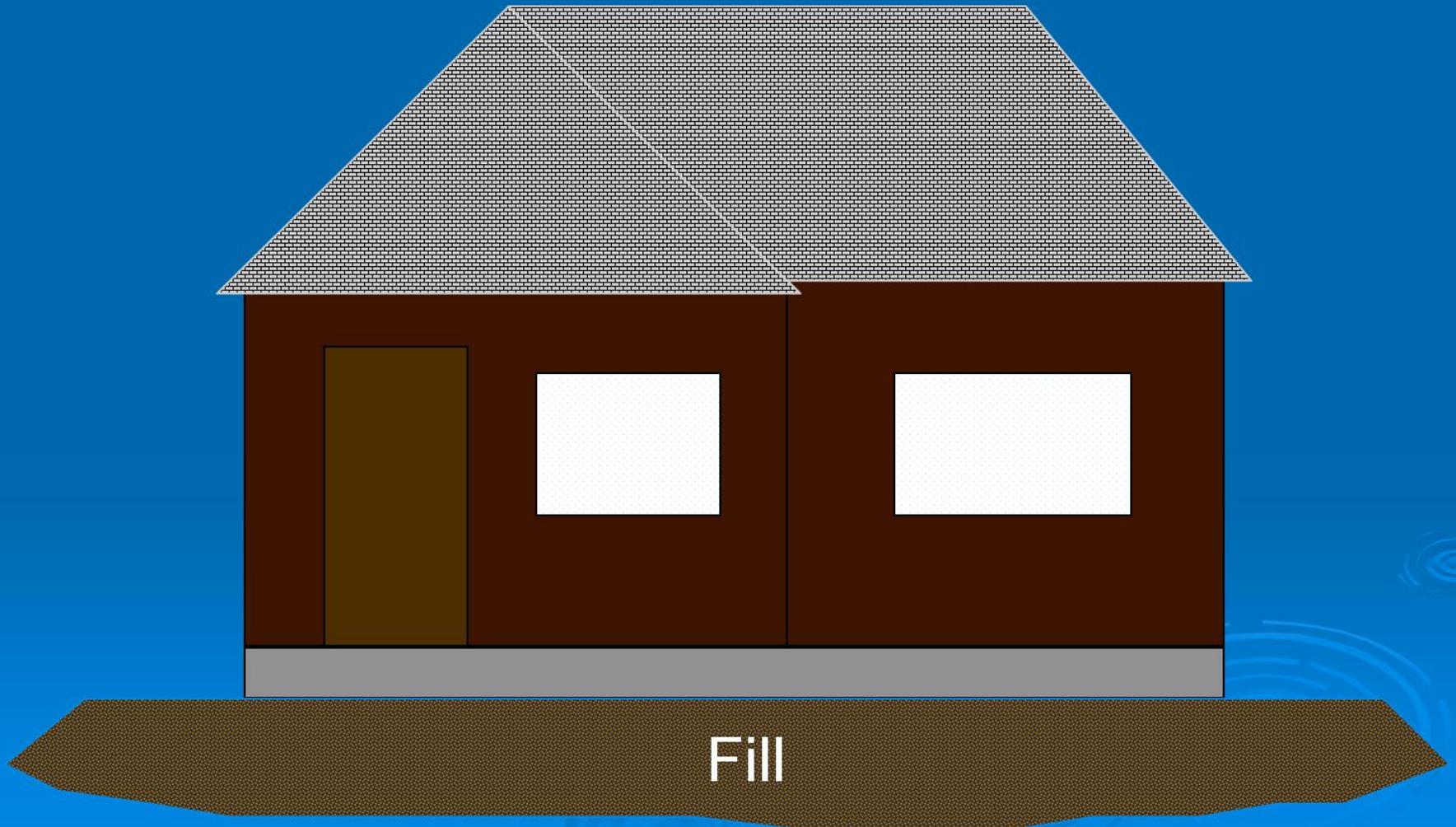
- Elevation on Fill
- Elevation on flow-thru walls
- Elevation by poles, piers, or columns



Site Plan



Slab on Fill



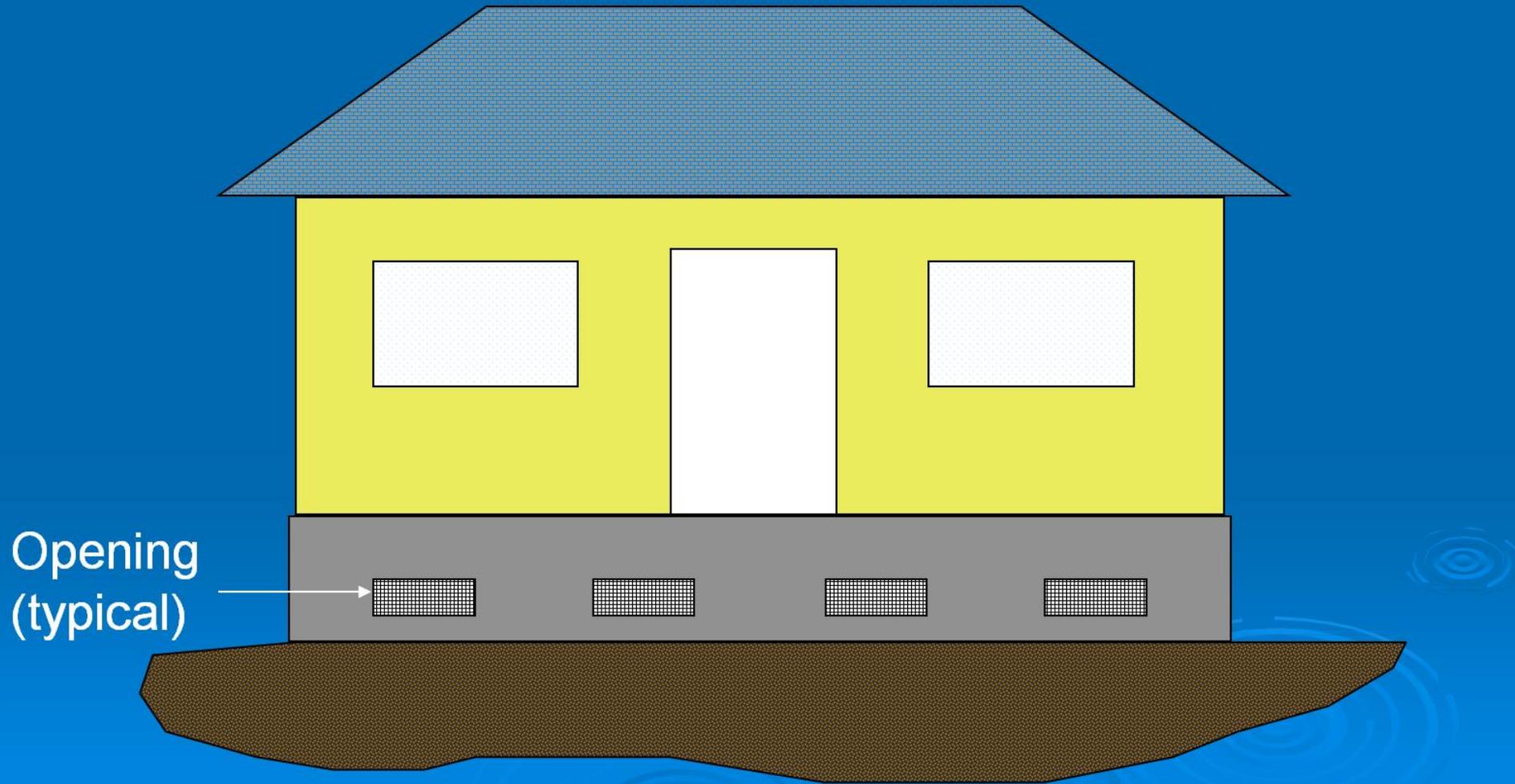
Criteria for Elevation on Fill

- Usually limited to three or four feet in height
- Fill placed in 6' layers and compacted (95% proctor)
- Extend fill 10' around structure
- Side slopes 1' vertical to 1.5' horizontal
- Erosion control



**House built on
fill above the
flood elevation**

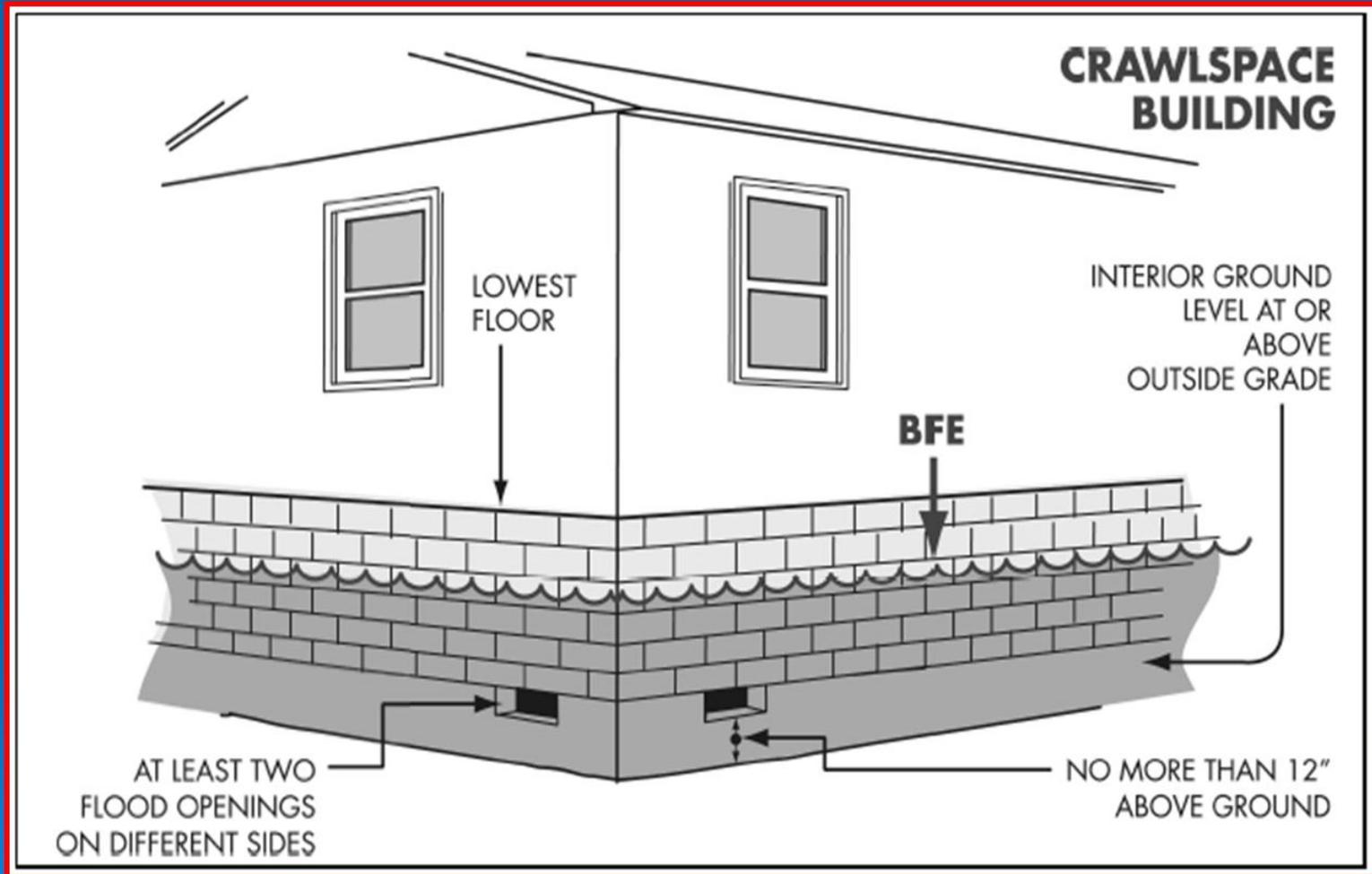
Perimeter Wall Foundation



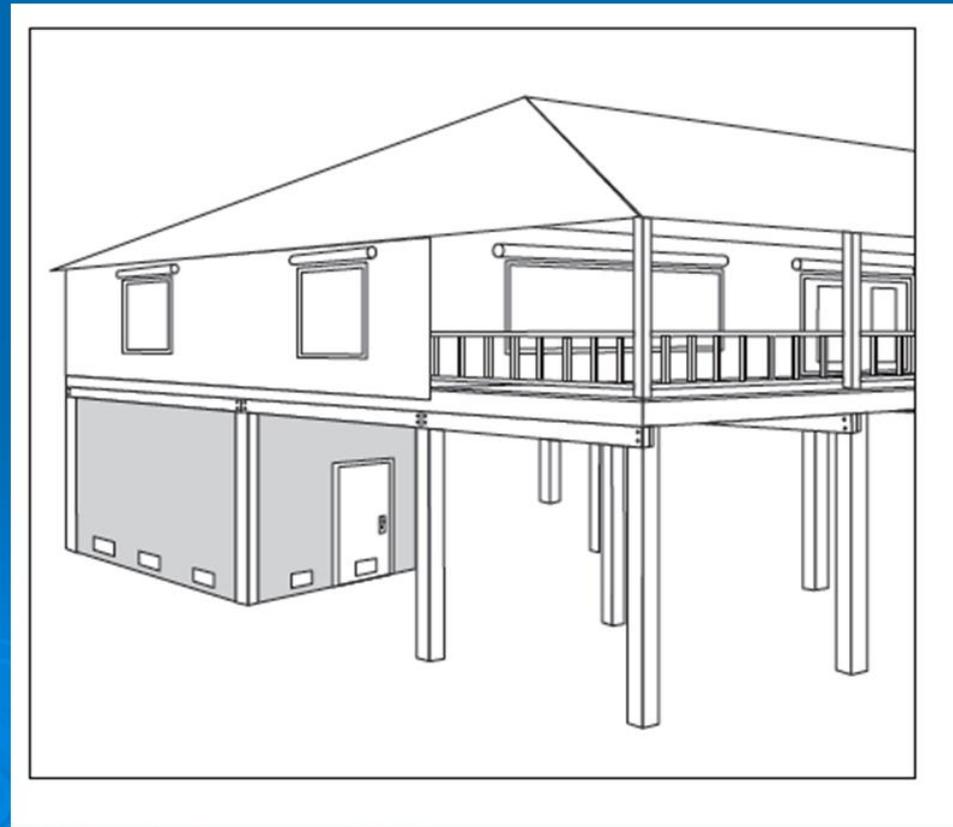
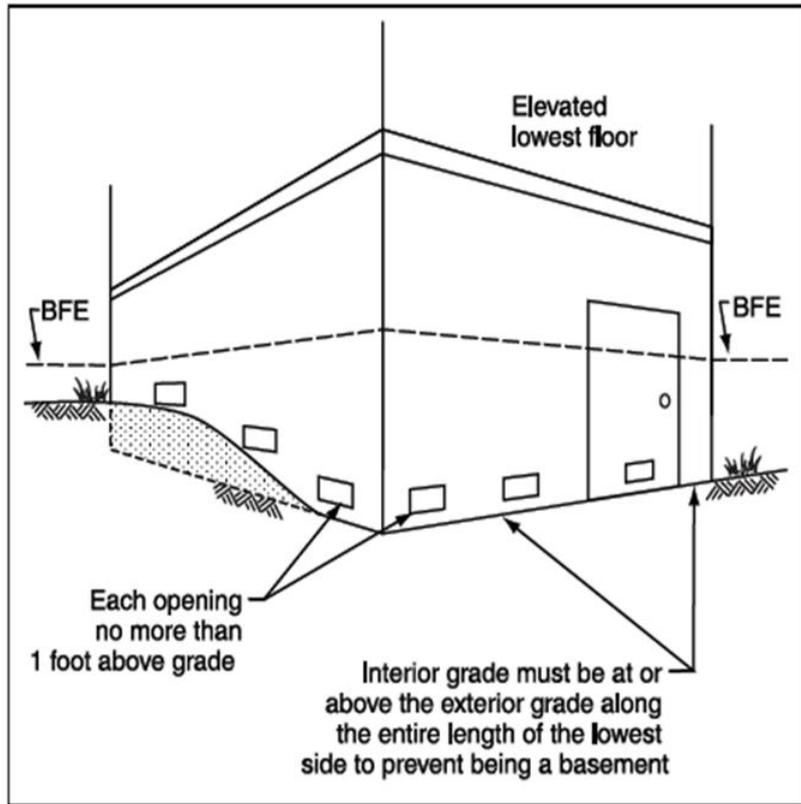
Criteria for Elevation on Perimeter Wall Foundations

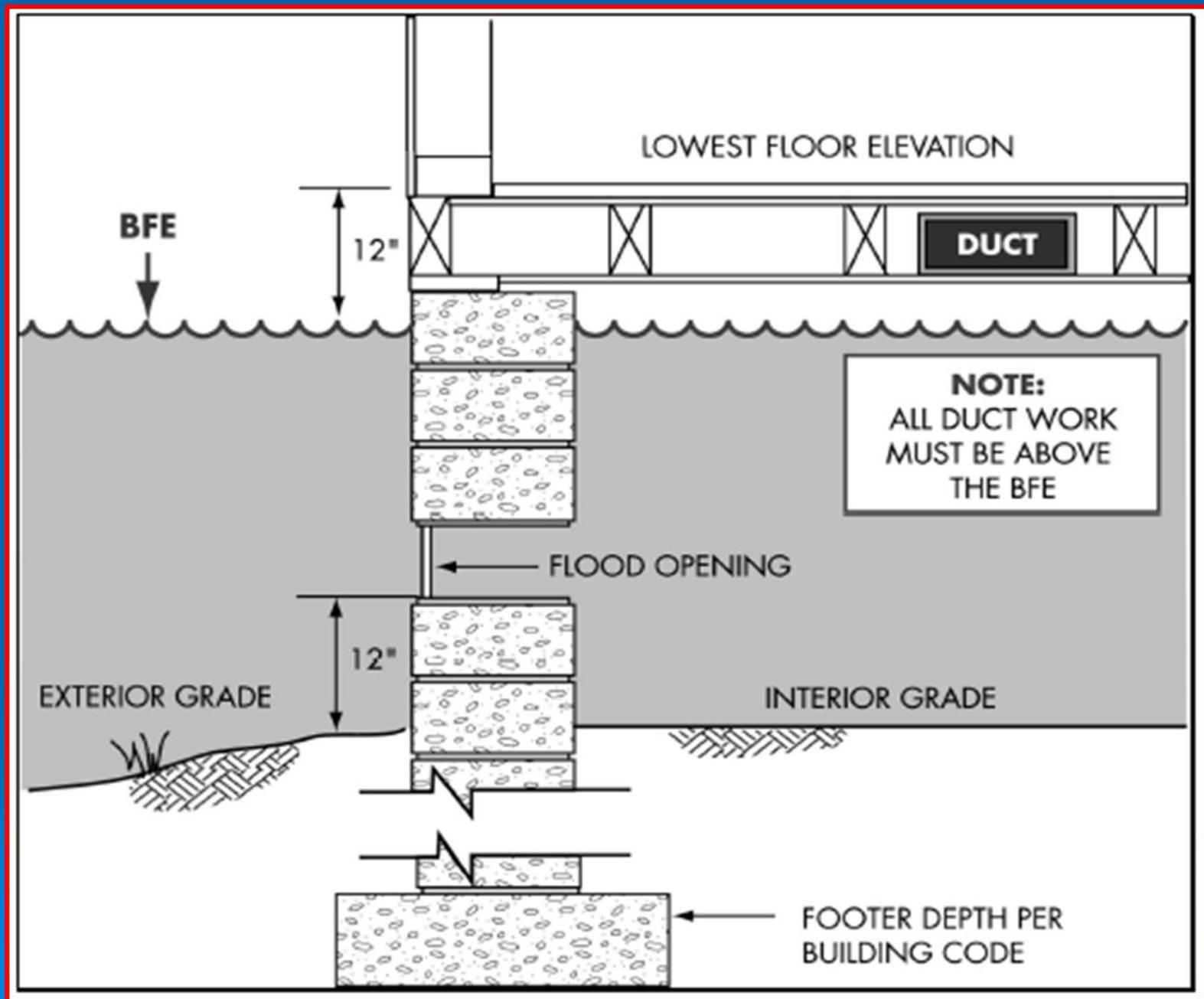
- Usually limited to three or four feet in height above grade
- Enclosed areas below the lowest floor must have openings to equalize hydrostatic pressures (1" per 1 sq. ft.).
- Openings no more than one foot above grade.
- Flood resistant materials
- NO HVAC, electric, utilities, etc..

Elevation on Solid Perimeter Walls



Any enclosed area must be flow thru

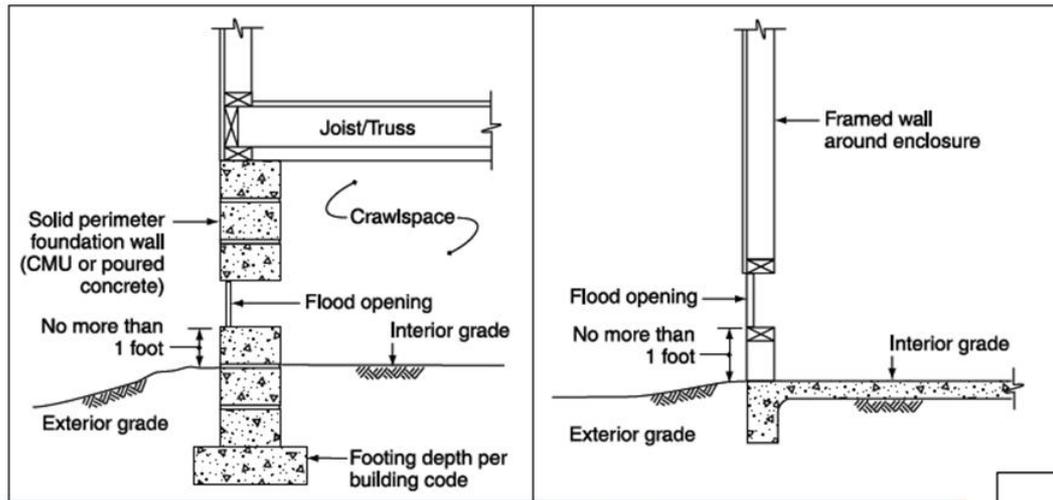




Crawlspace Rules

- Total height no more than 4 feet.
- No more than 2' below grade.
- Flow through openings
- Interior drainage controls
- Flood resistant materials

Crawlspaces



Interior above grade?

or

Interior below grade?

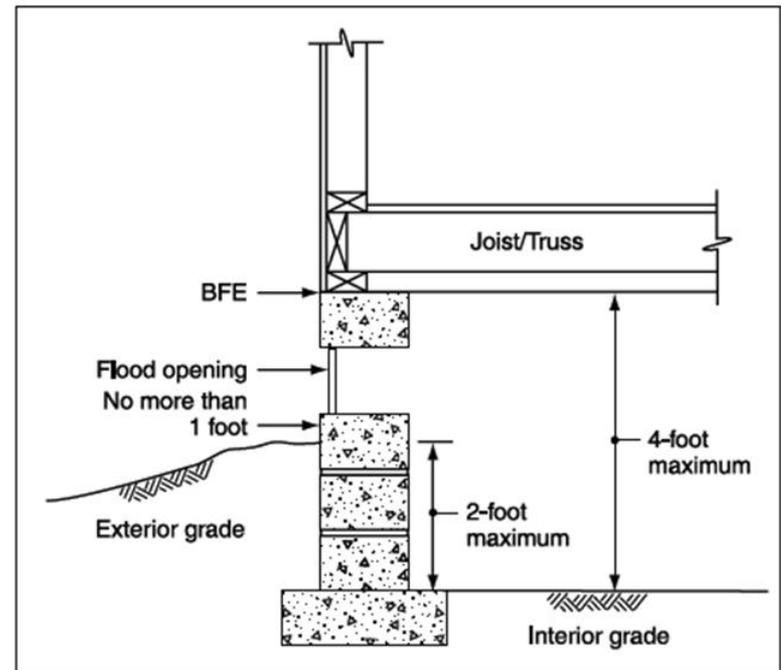
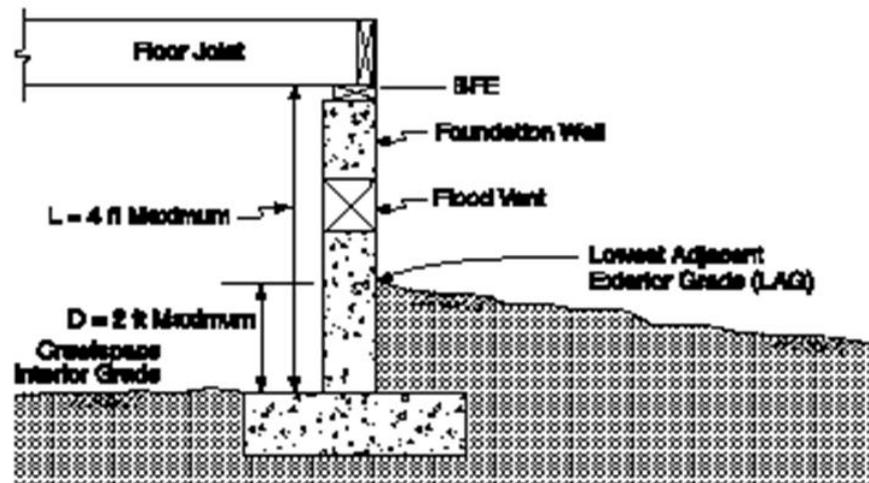
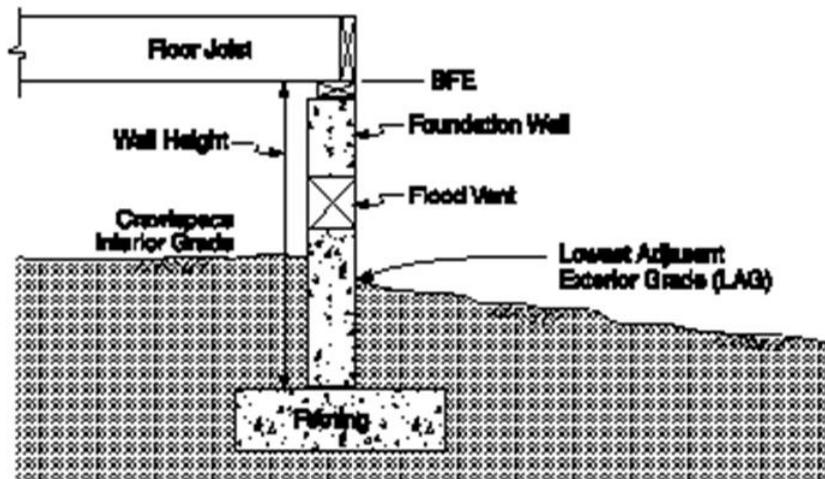


Figure 2. Limitations on below-grade crawlspaces in shallow flood hazard areas (TB 11)

Technical Bulletin 11-01





Openings in Foundation Walls and Walls of Enclosures

Below Elevated Buildings in Special Flood Hazard Areas
in accordance with the National Flood Insurance Program

Technical Bulletin 1 / August 2008



Technical Bulletin #1

www.FEMA.gov

Search window:
Technical Bulletin 1

Watch the vents!

“standard vents” are only 42 sq. in.

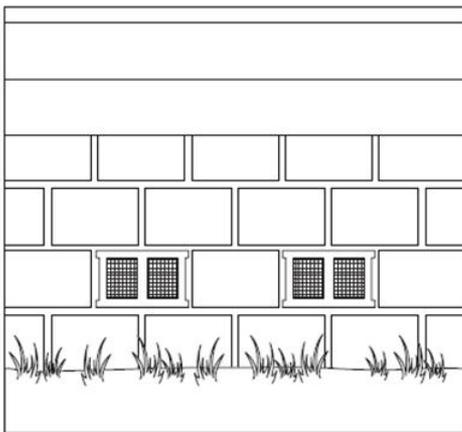
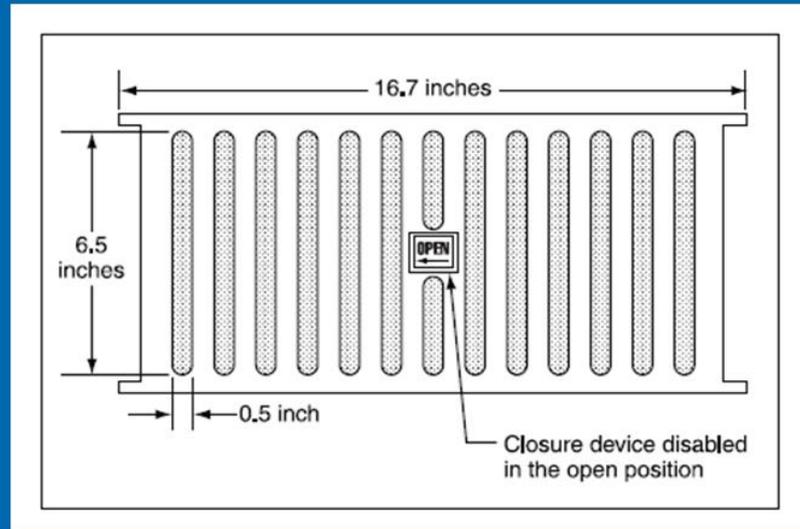


Figure 20. Concrete block turned sideways (insect screening shown)

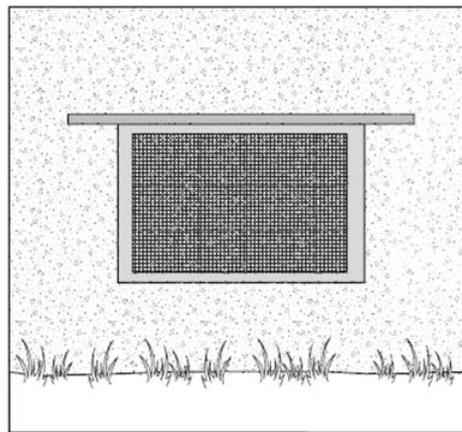
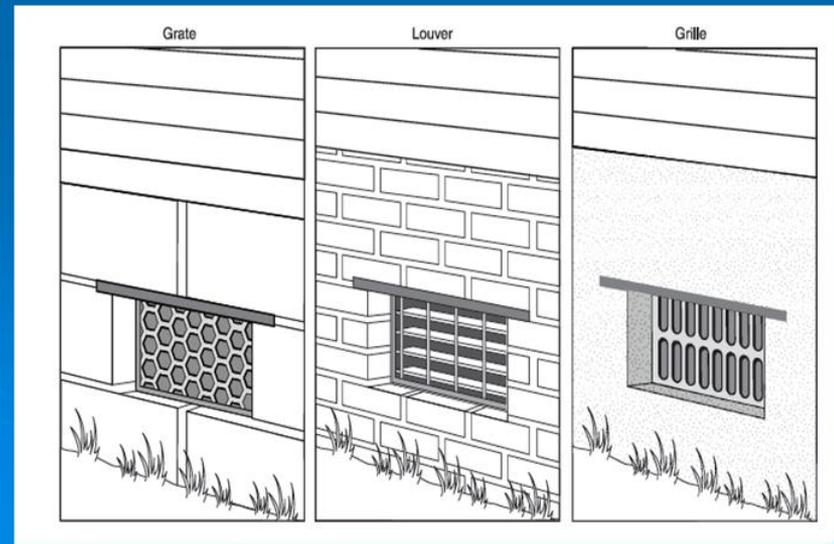


Figure 21. Wood frame with insect screen inserted in opening in poured concrete foundation wall

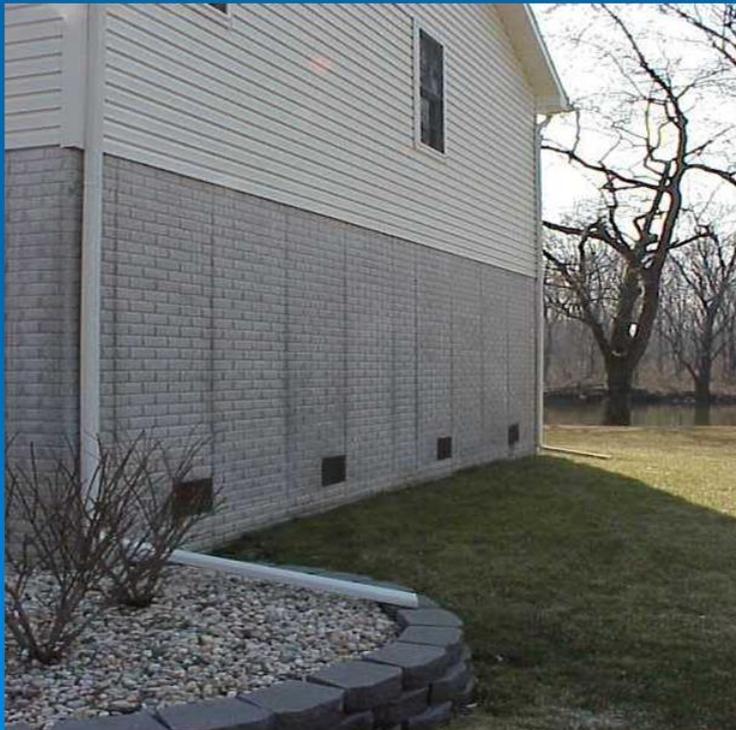


Section A – Property Information

Engin-nerd Vents?



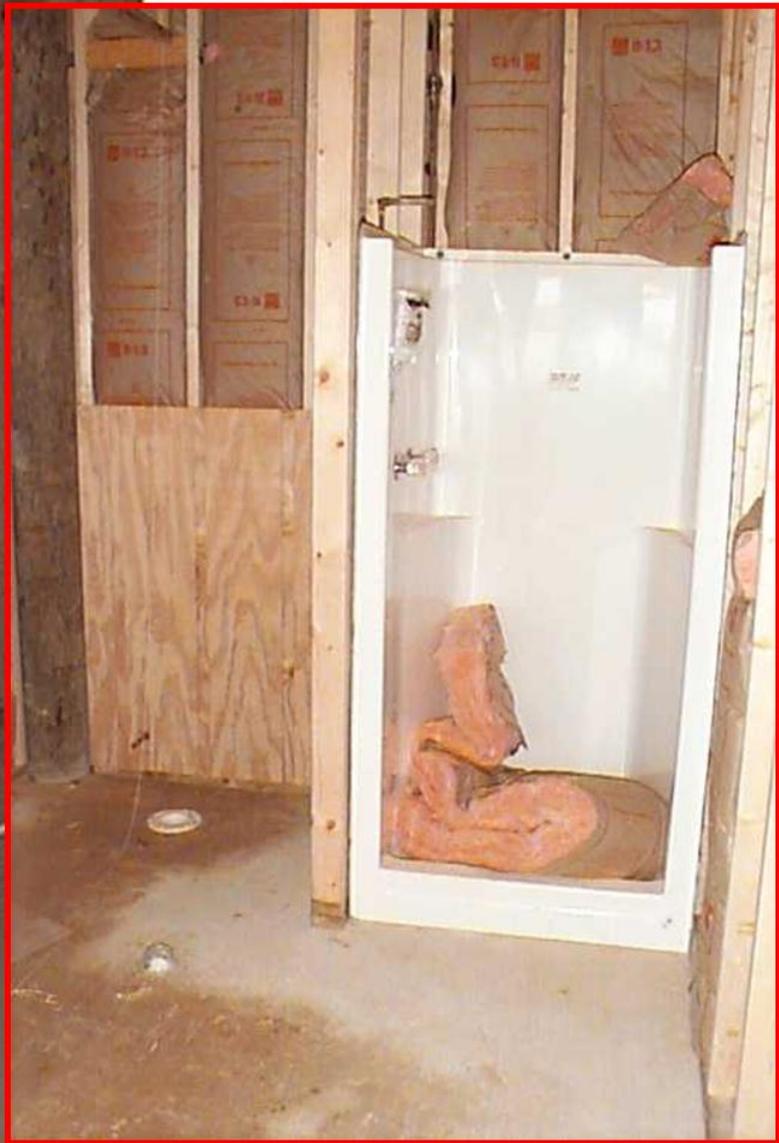
**House built on
elevated
foundation walls**



**Flow through
lower area**



What do you notice about the vents?



NON-CONVERSION AGREEMENT FOR ENCLOSURE BELOW THE BASE FLOOD ELEVATION

This DECLARATION made this ____ day of _____, 20____, by _____ ("Owner") having an address at _____

WITNESSETH:

WHEREAS, the Owner is the record owner of all that real property located at _____ in the City of _____ in the County of _____, as designated in the Tax Records as _____.

WHEREAS, the Owner has applied for a permit to place a structure on that property that has an enclosed area below the base flood elevation constructed in accordance with the requirements of Article _____, Section _____ of the Floodplain Management Ordinance of _____ ("Ordinance") and under Permit Number _____ ("Permit").

WHEREAS, the Owner agrees to record this DECLARATION and certifies and declares that the following covenants, conditions and restrictions are placed on the affected property as a condition of granting the Permit, and affects rights and obligations of the Owner and shall be binding on the Owner, his heirs, personal representatives, successors, future owners, and assigns.

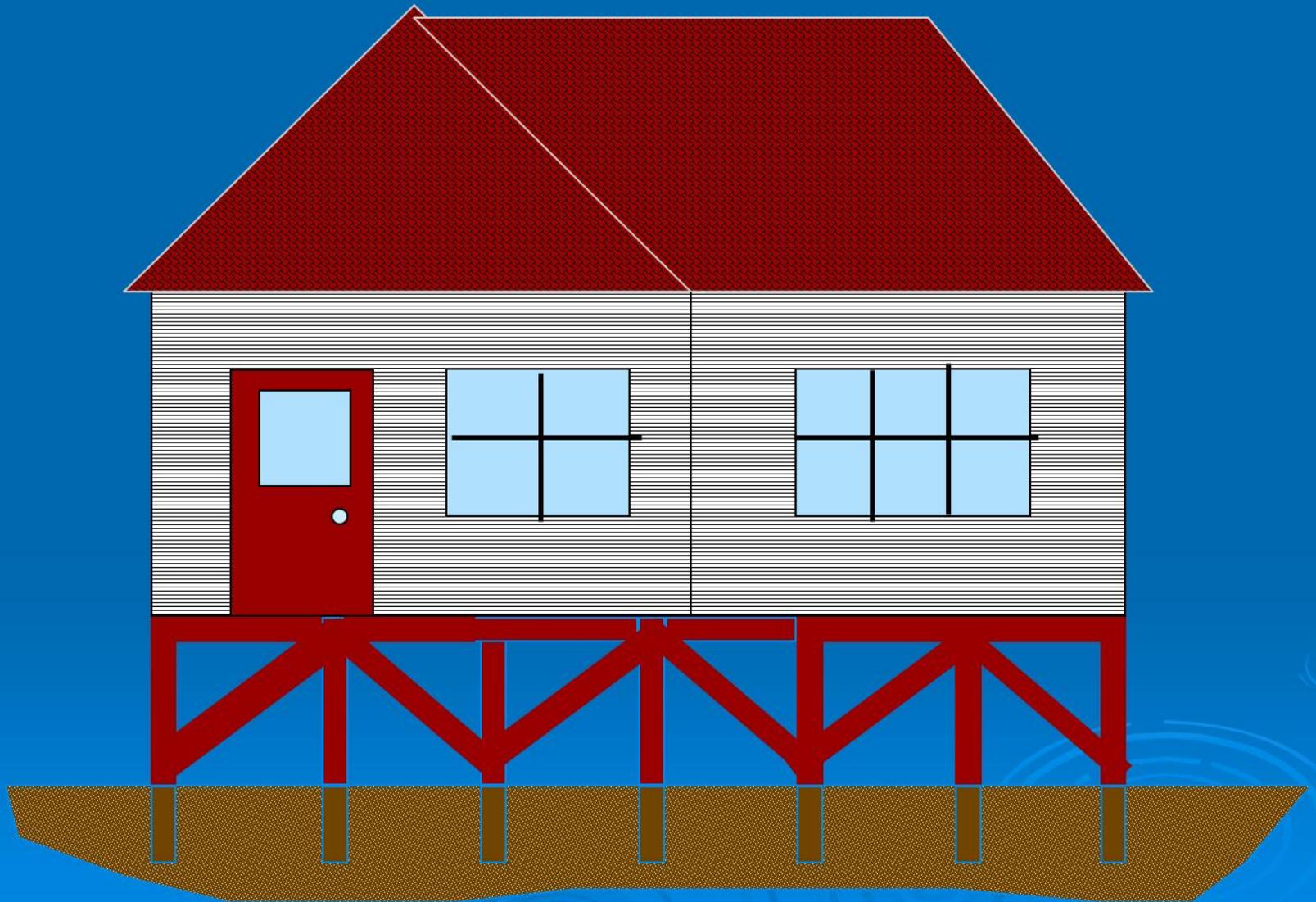
UPON THE TERMS AND SUBJECT TO THE CONDITIONS, as follows:
The structure or part thereof to which these conditions apply is:

1. At this site, the Base Flood Elevation is _____ feet above mean sea level, National Geodetic Vertical Datum.
2. Enclosed areas below the Base Flood Elevation shall be used solely for parking of vehicles, limited storage, or access to the building.
3. All interior walls, ceilings and floors below the Base Flood Elevation shall be constructed of flood resistant materials.
4. Mechanical, electrical or plumbing devices shall not be installed below the Base Flood Elevation.
5. The walls of the enclosed areas below the Base Flood Elevation shall be equipped and remain equipped with permanent flow-thru openings as shown on the Permit.
6. The jurisdiction issuing the Permit and enforcing the Ordinance may take any appropriate legal action to correct any violation. Any alterations or changes from these conditions also may render the structure uninsurable or increase the cost for flood insurance.
7. A duly appointed representative of the City is authorized to enter the property for the purpose of inspecting the exterior and interior of the enclosed area to verify compliance with this Declaration.

Non Conversion Agreement

**Recommended on
all enclosed lower
areas!!**

Post or Pile Foundation



Post or Pile Foundations

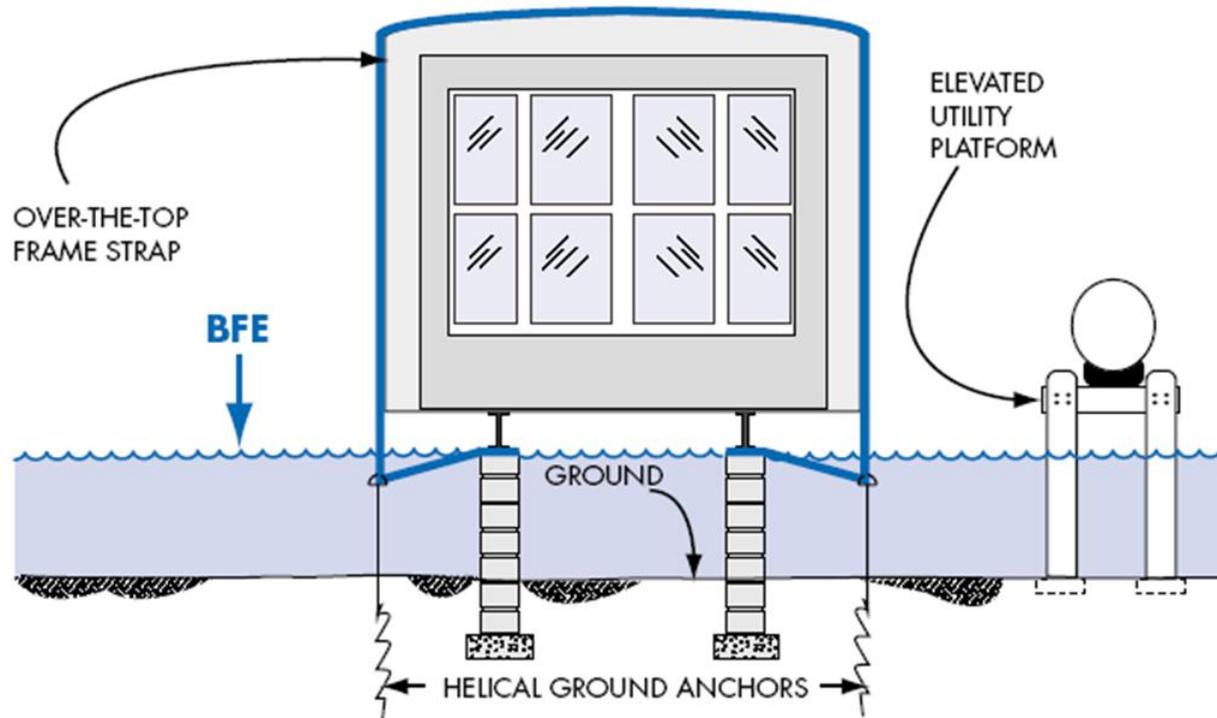
- Should be used in areas of deep flooding and/or high velocities (floodways)
- Properly anchored to resist wind and water forces
- Lower area must remain open (not enclosed later). Get non-conversion agreement.



**House built on
piers or poles
above the flood
elevation**



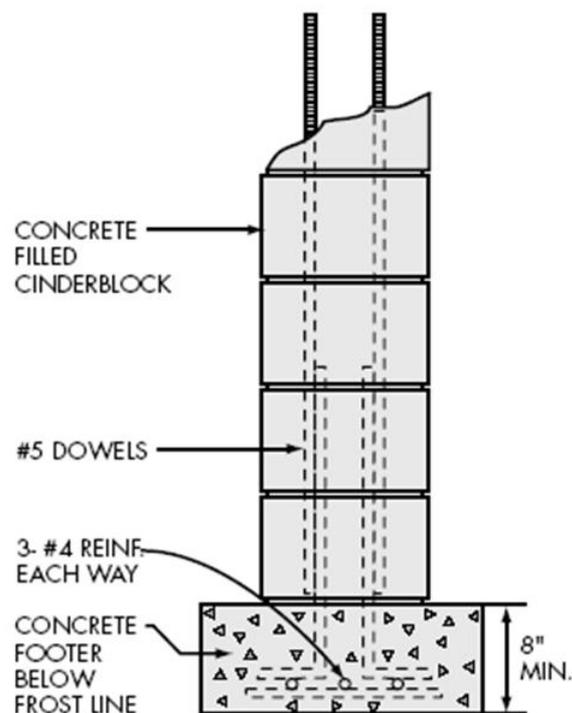
Manufactured Homes Deserve Special Attention



Manufactured homes must be anchored to resist flotation, collapse, or lateral movement by being tied down in accordance with the Rules and Regulations for the Illinois Mobile Home Tie-Down Act (77 IL Administrative Code 870, IL Dept. of Public Health).

Experience shows that manufactured homes are easily damaged. As little as one foot of water can cause substantial damage.

Dry stacked blocks are not acceptable — they will **NOT** withstand a flood.

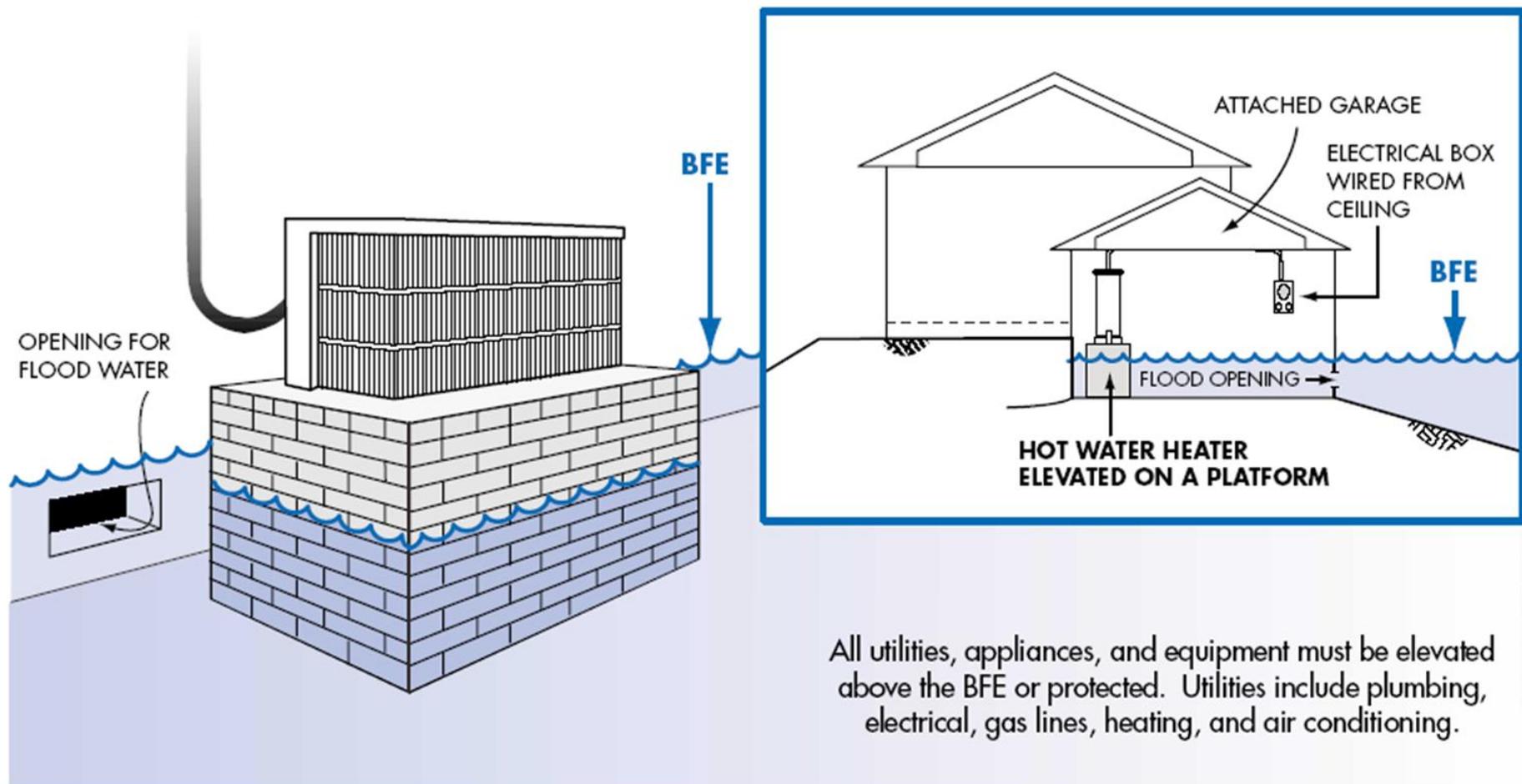


Standards for Utilities and Building Systems

All new construction and improvement shall be constructed with electrical, HVAC, plumbing and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

The background of the slide features several faint, concentric circular ripples in a lighter shade of blue, resembling water droplets or raindrops, positioned in the lower right and bottom center areas.

Utility Service for Buildings

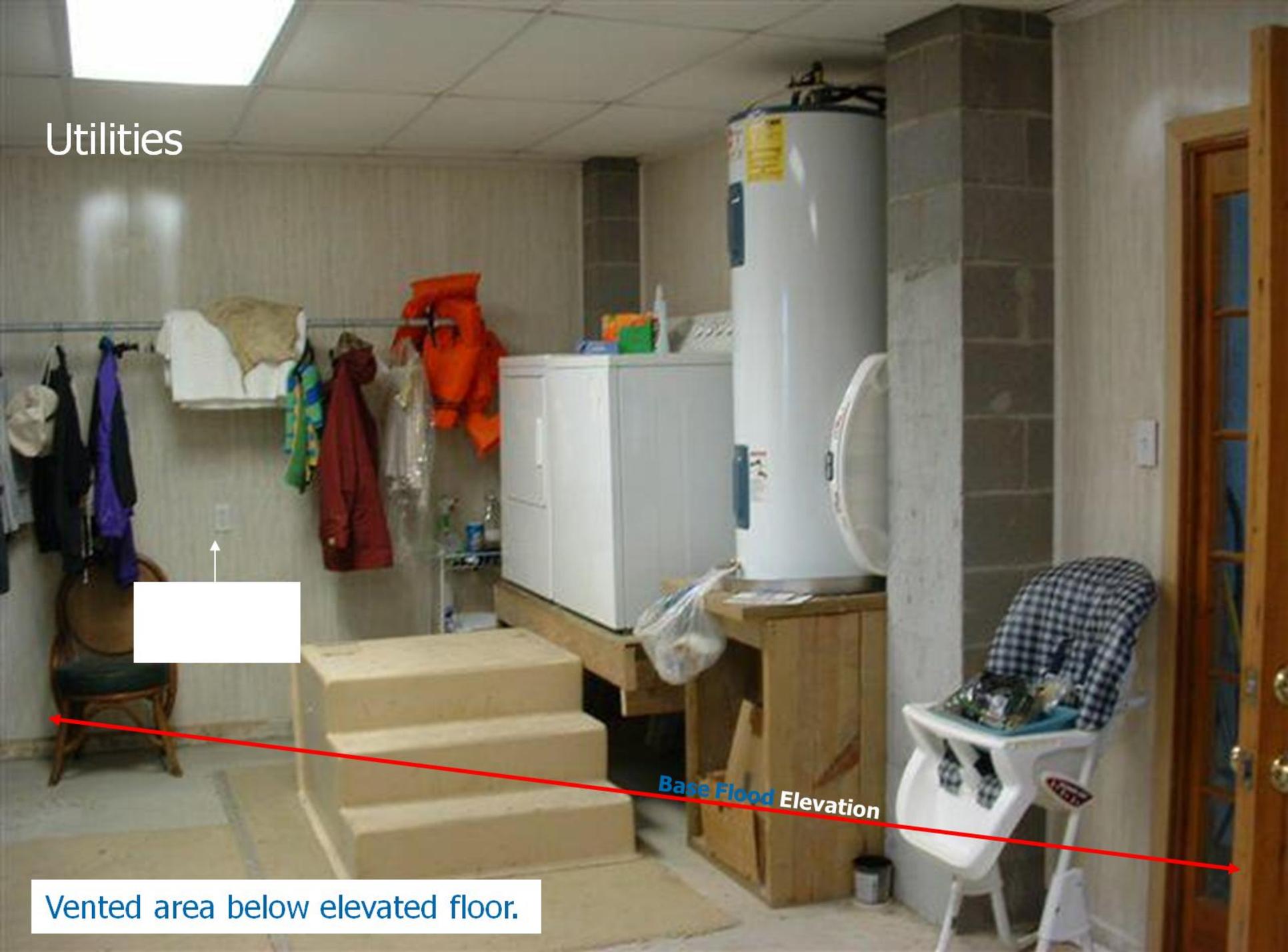




Above ground tanks



Utilities



Base Flood Elevation

Vented area below elevated floor.



Recreational Vehicles & Travel Trailers

1. Self propelled or towable by a light duty truck
2. No porch or deck
3. No permanent dwelling. Only seasonal use.
4. No more than 400 sq. ft.
5. Wheels on axles and inflated
6. Quick disconnect utilities
7. Licensed and titled as an RV
8. Supported by wheels or jacks. No blocks.



If an RV is on-site for more than 180 days, it must:



Wet Floodproofing / Minor Accessory Structures

“Permanent or contingent measures applied to a structure and/or its contents that prevent or provide resistance to damage from flooding by allowing flood waters to enter the structure.”



Wet Floodproofing / Minor Accessory Structures

When to Use Wet Floodproofing

- Enclosed areas below the BFE that are used for parking, building access, or limited storage
- Attached or detached garages
- Minimal value storage sheds and garages

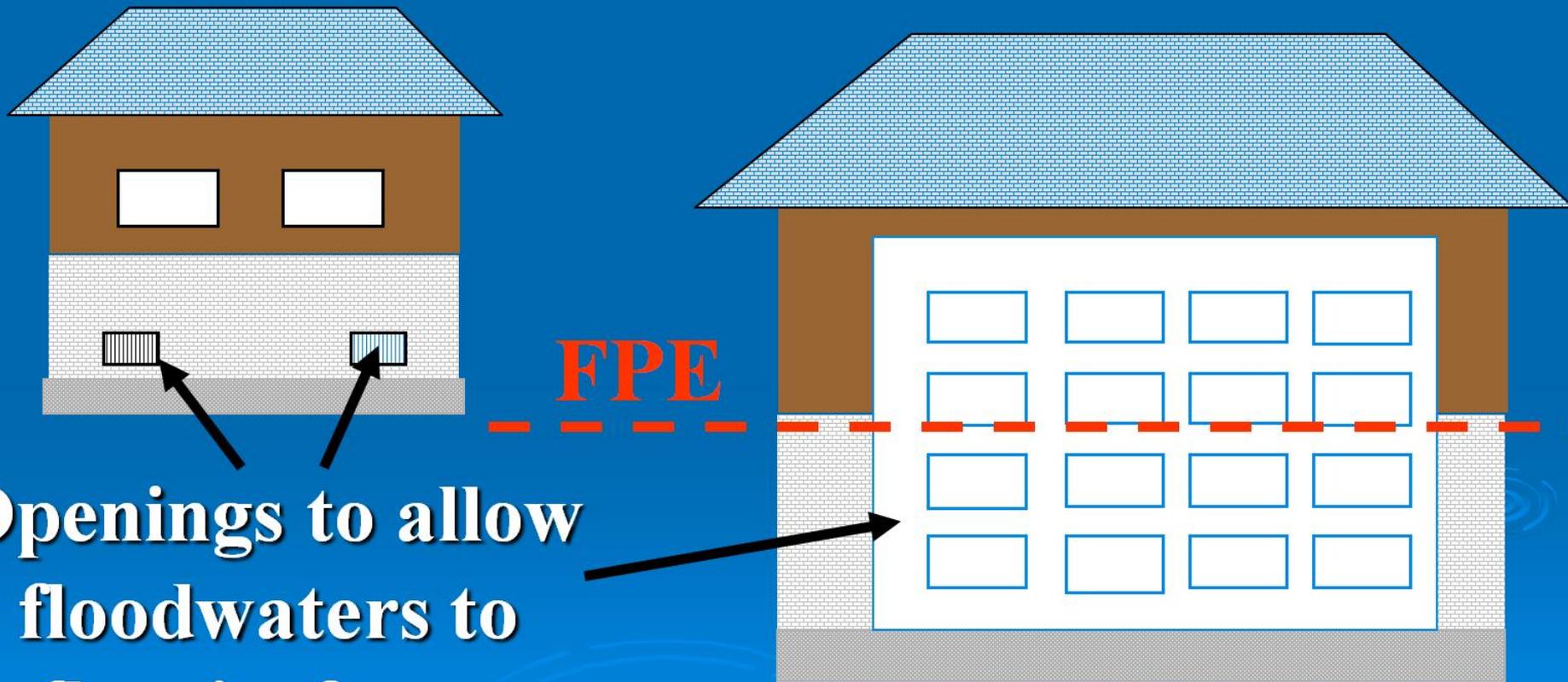
Wet Floodproofing Garages and Sheds

- Non-habitable
- Use only for storage and parking & no later modification
- Accessory to an existing structure on same lot
- Flood resistant materials
- No HVAC
- Flow-thru openings
- Less than \$10,000 in value and less than 500 sq. ft.



Accessory Structure

Wet Floodproofing Standards

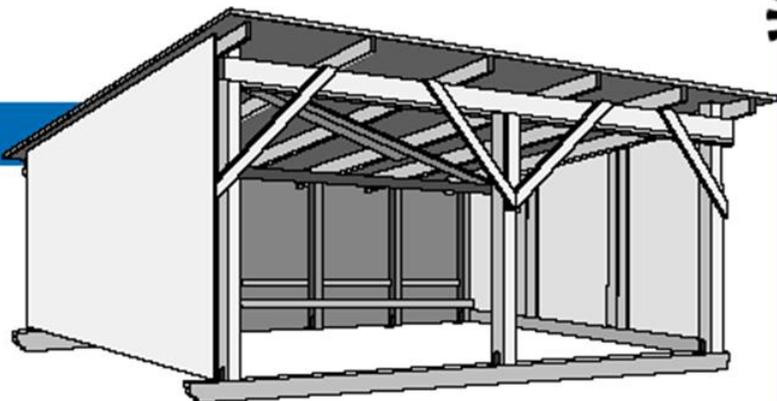


Openings to allow
floodwaters to
flow in & out

Agricultural Structures

Variations are allowed for:

- Pole frame buildings
- Steel grain bins
- Steel frame corn cribs
- General purpose feeding barns open on one side



Variations are not allowed for:

- Livestock confinement buildings
- Poultry houses
- Dairy operations
- Similar livestock operations



Important

Information

Farm houses are not agricultural structures.

Contact IDNR/OWR for additional guidance on variations for agricultural structures.



State Specific

Guidance

Non-elevated agricultural structures must be considered on a site-specific basis and may be permitted only by a variance. Applicants must show that sites are in "wide, expansive floodplain areas" and no other alternative location outside of the Floodplain exists.

The best flood protection is to elevate agricultural buildings, but certain types can be approved by variance if they are "wet floodproofed."

Non-Residential Floodproofing

ONLY NON-RESIDENTIAL STRUCTURES MAY BE FLOODPROOFED IN LIEU OF ELEVATION.



Floodproofing Requirements

1. Non-residential construction may be floodproofed below the BFE so that the structure is watertight with walls substantially impermeable to the passage of water.
2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

Floodproofing Certificate

- A Floodproofing Certificate is required for all floodproofed structures
- The Floodproofing Certificate must be signed by an Engineer
- The form can be obtained at:
www.FEMA.gov/library/floodproof

NATIONAL FLOOD INSURANCE PROGRAM
FLOODPROOFING CERTIFICATE
FOR NON-RESIDENTIAL STRUCTURES

The floodproofing of non-residential buildings may be permitted as an alternative to elevating to or above the Base Flood Elevation; however, a floodproofing design certification is required. This form is to be used for that certification. Floodproofing of a residential building does not alter a community's floodplain management elevation requirements or affect the insurance rating unless the community has been issued an exception by FEMA to allow floodproofed residential basements. The permitting of a floodproofed residential basement requires a separate certification specifying that the design complies with the local floodplain management ordinance.

BUILDING OWNER'S NAME	FOR INSURANCE COMPANY USE	
STREET ADDRESS (Including Apt., Unit, Suite, and/or Bldg. Number) OR P.O. ROUTE AND BOX NUMBER	POLICY NUMBER	
OTHER DESCRIPTION (Lot and Block Numbers, etc.)	COMPANY NAIC NUMBER	
CITY	STATE	ZIP CODE

SECTION I FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Provide the following from the proper FIRM:

COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM INDEX	FIRM ZONE	BASE FLOOD ELEVATION (in AO Zones, Use Depth)

SECTION II FLOODPROOFING INFORMATION (By a Registered Professional Engineer or Architect)

Floodproofing Design Elevation Information:

Building is floodproofed to an elevation of _____ feet NGVD. (Elevation datum used must be the same as that on the FIRM.)

Height of floodproofing on the building above the lowest adjacent grade is _____ feet.

(NOTE: for insurance rating purposes, the building's floodproofed design elevation must be at least one foot above the Base Flood Elevation to receive rating credit. If the building is floodproofed only to the Base Flood Elevation, then the building's insurance rating will result in a higher premium.)

SECTION III CERTIFICATION (By Registered Professional Engineer or Architect)

Non-Residential Floodproofed Construction Certification:

I certify that, based upon development and/or review of structural design, specifications, and plans for construction, the design and methods of construction are in accordance with accepted standards of practice for meeting the following provisions:

The structure, together with attendant utilities and sanitary facilities, is watertight to the floodproofed design elevation indicated above, with walls that are substantially impermeable to the passage of water.

All structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy, and anticipated debris impact forces.

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.

CERTIFIER'S NAME	LICENSE NUMBER (or Affix Seal)		
TITLE	COMPANY NAME		
ADDRESS	CITY	STATE	ZIP CODE
SIGNATURE	DATE	PHONE	

Copies should be made of this Certificate for: 1) community official, 2) insurance agent/company, and 3) building owner.

The Floodproofing Certificate must be signed by an engineer and on file for EVERY floodproofed structure

Substantial Improvement



Substantial Improvement

➤ Lateral additions or vertical additions

- 50% increase in market value or
- 20% increase in floor area*

(*Illinois specific ordinance....not true in IA)

Substantial Improvement

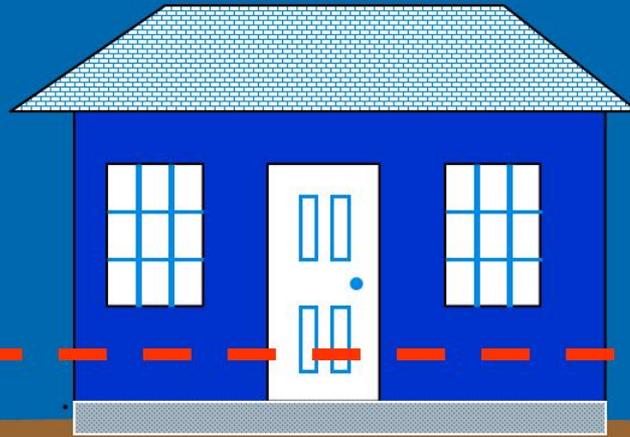
The formula

$$\frac{\text{Cost of improvement project}}{\text{Market value of the building}} \geq 50\%$$

Example:

$$\frac{\$75,000 \text{ project}}{\$140,000 \text{ house}} = 54\%$$

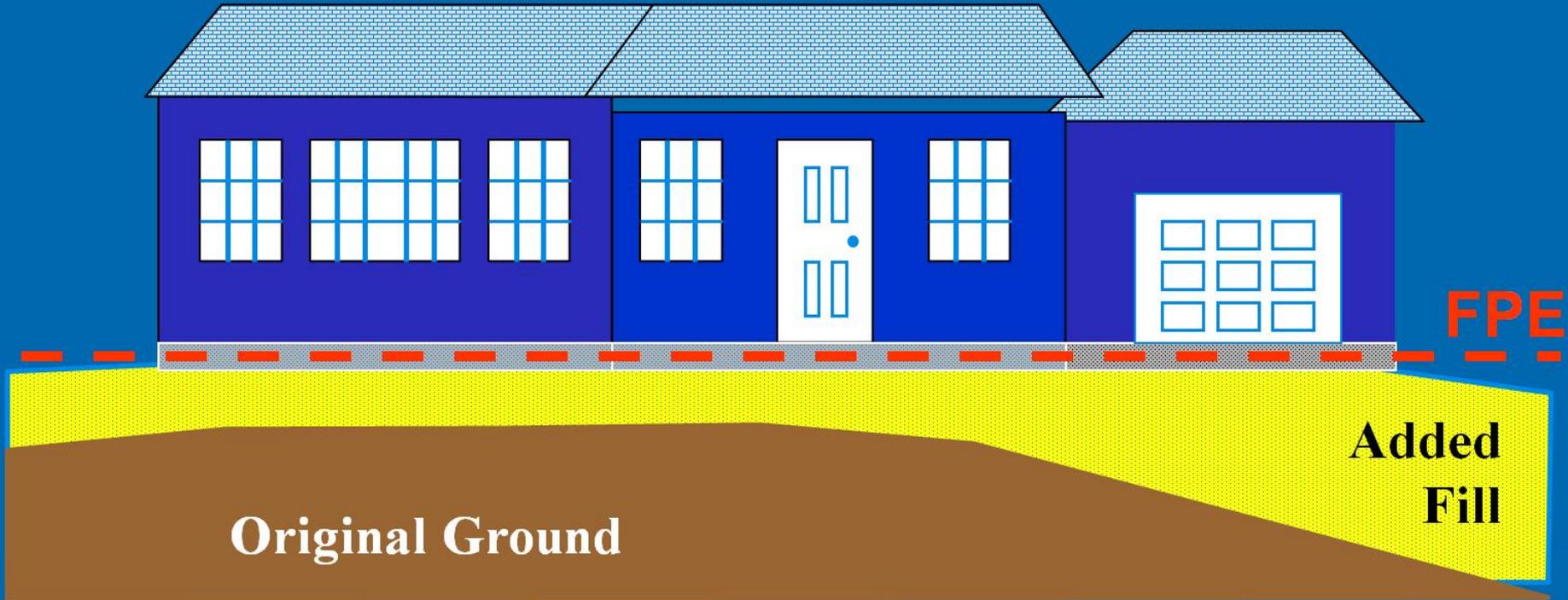
Existing House



FPE

Original Ground

Substantial Improvement Existing House + Garage/FR/BR Addition



- Raise Existing House & Build Addition above FPE

Substantial Damage (The 50% Rule)



Substantial Damage

“The 50% Rule”:

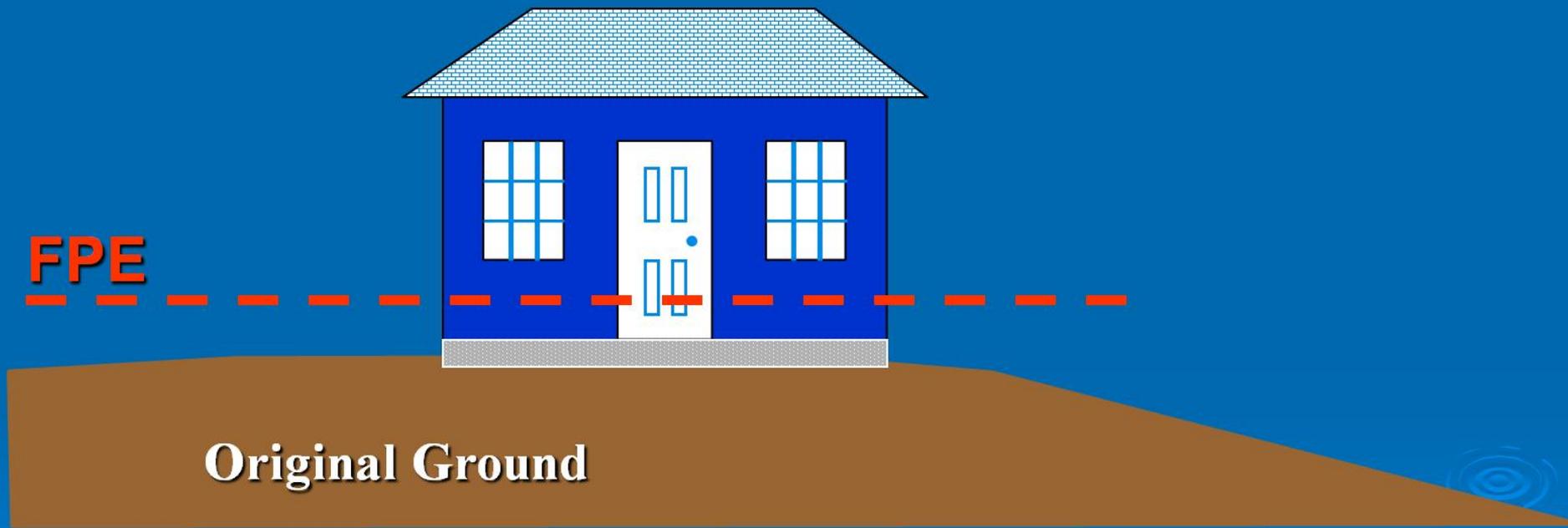
If damages from ANY source (flood, fire, tornado, etc..) exceed 50%.

The structure must be brought into compliance with floodplain regulations (elevated or floodproofed).

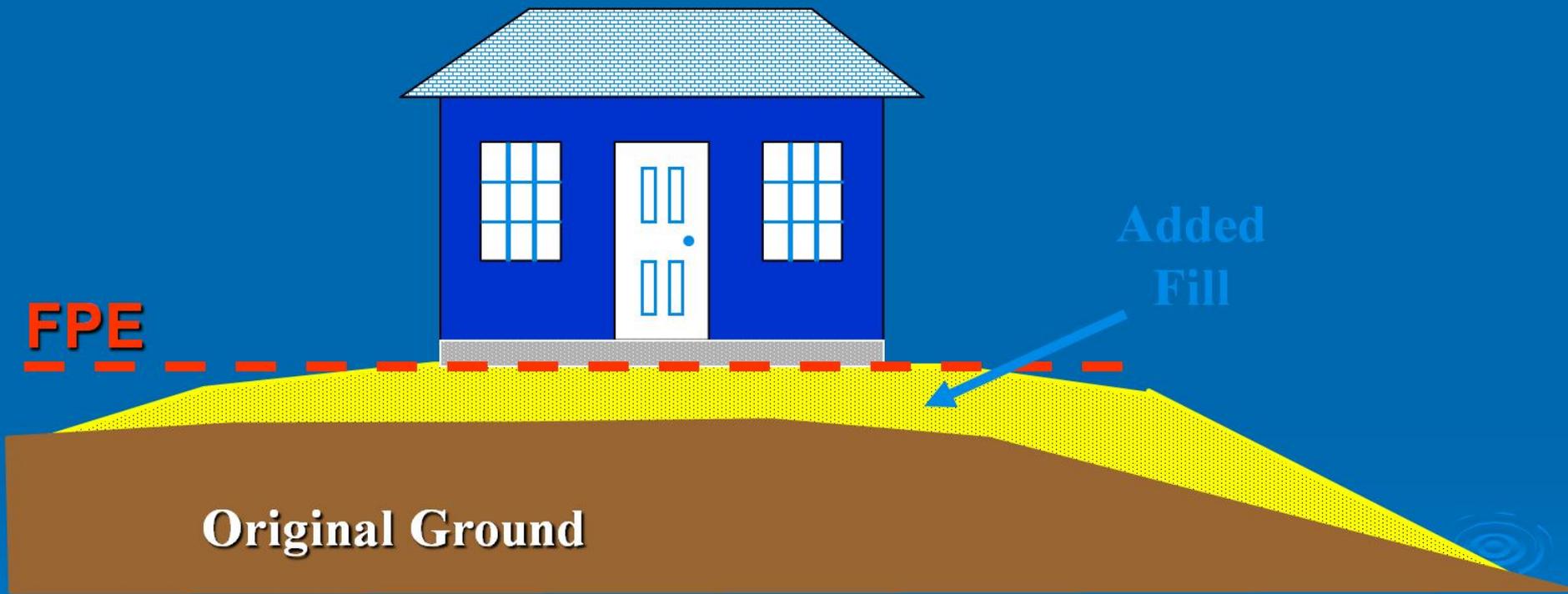
THE Illinois state model ordinance tracks CUMMULATIVE substantial damage

Existing House

One-Story with Floor Below FPE



Substantially Damaged House Raised & Rebuilt above FPE



Post-Flood Requirements

- Perfect time to reconstruct the RIGHT WAY!
- Available mitigation funds???
- Flood Insurance help???
- Obtain state or cooperative assistance
- ALL RED TAGGED (substantially damaged) buildings must be brought into compliance regardless of insurance or mitigation availability.

Post Flood Responsibilities

- **MOVE FAST! Don't wait for FEMA!**
- **Identify, tag, and document flooded structures**
- **Post information for the public on permit requirements. Use media sources.**
- **Provide technical information**
- **Contact State or FEMA for assistance and guidance if needed.**

State of Illinois Flood Damage Assessment Packet



A cooperative effort by:

Illinois Department of Natural Resources
Office of Water Resources

Illinois Emergency Management Agency

Federal Emergency Management Agency

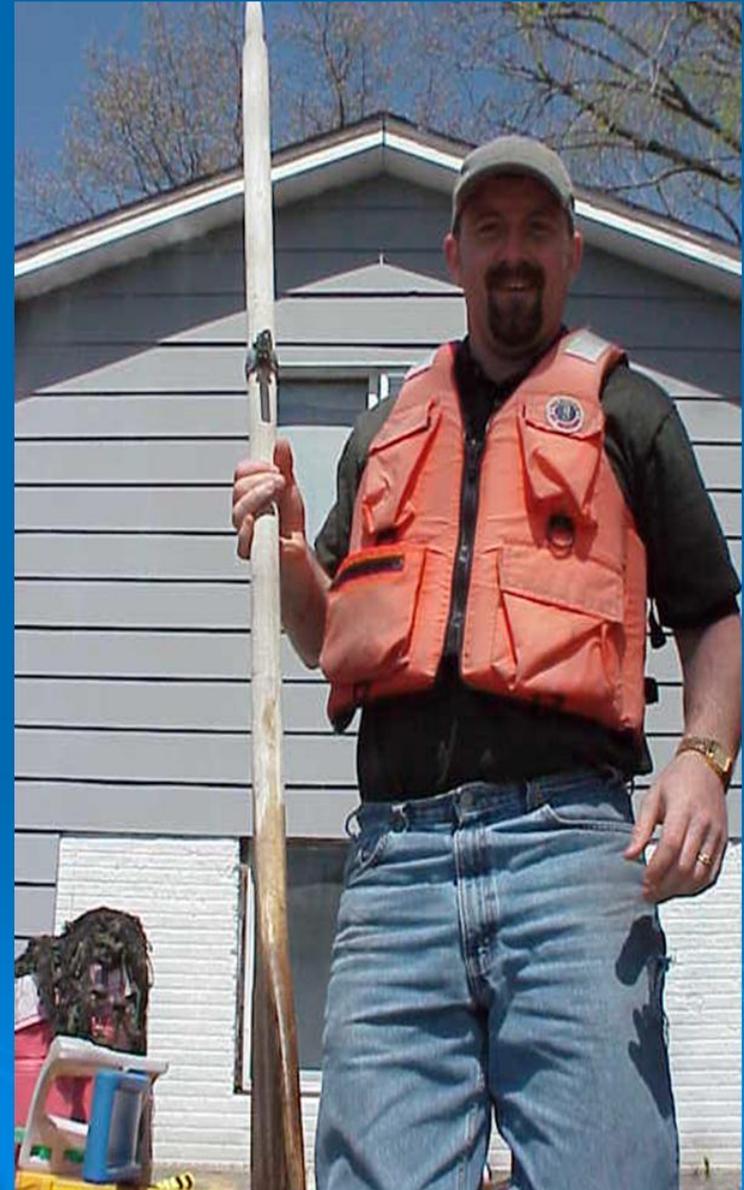


2008 update

Includes Information On:

Steps to take following a flood
Substantial damage determinations
Blank damage assessment worksheets
FEMA Residential Substantial Damage Estimator (RSDE)
RSDE Field Worksheet
Information on state floodway permit requirements
Sample letter
Sample Notice
Information on mitigation programs

Field Inspections During FloodCrest



Post Flood – Survey

- Document high water marks
- Digital photos
- Mark locations on map
- Post notices on properties
- Follow up letters



What is Increase Cost of Compliance (ICC)??

- Part of the standard Flood Insurance Policy.
- Not a grant.
- Up to \$30,000 to assist with code compliance:
 - **F**loodproof
 - **R**elocate
 - **E**levate
 - **D**emolish

ICC opens the Window of Opportunity



How to Qualify for ICC??

Three conditions must be met for an ICC claim to be paid:

- **Building must be covered by a Standard Flood Insurance Policy.**
- **Structure must be substantially damaged or cumulatively substantially damaged by a flood.**
- **The building has a history of NFIP claim payments that satisfy the definition of “target group repetitive loss structure”.**



When ICC is Approved

- **NFIP will release $\frac{1}{2}$ of the estimated amount to begin construction.**
- **NFIP will release the other $\frac{1}{2}$ when an elevation certificate and local building permit showing compliance is provided.**



QUICK Mitigation is the Key



One month
after the
flood!!!!



ICC Before and After

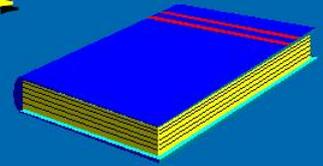


If your community has any Rep Loss properties...

- There is **NO, NO, NO, NO, NO, NO, NO, NO, NO** reason that you should not have adopted a cumulative substantial damage provision in your local ordinance!!!

NO REASON!

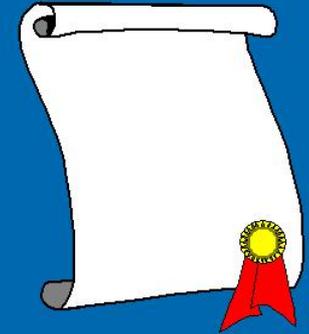
FEMA Technical Bulletins and References



- TB 1 - Openings in Foundation Walls and Walls of Enclosures
- TB 2 - Flood Damage-Resistant Materials Requirements
- TB 3 - Non-Residential Floodproofing -- Requirements and Certification
- TB 4 - Elevator Installation
- TB 6 - Below-Grade Parking Requirements
- TB 7 - Wet Floodproofing Requirements
- TB 10 - Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas are Reasonably Safe From Flooding
- TB 11 - Crawlspace Construction for Buildings Located in Special Flood Hazard Areas

Record Keeping

Maintains records of floodplain development...



- Application, Inspection Records
- Compliance Records, i.e., Certified As-Built Lowest Floor Elevations, Variance Actions
- Flood Insurance Rate Map Corrections (LOMCs)
- Assist public in reviewing maps.

Got GIS? Risk Identification!

GIS_Floodplain_Editing_Map - ArcMap - ArcView

File Edit View Insert Selection Tools Window Help

Editor Task: Create New Feature Target: Shortest Path... Spatial Adjustment

1:208,680 BHA FarmLand 3.2

tributes of Structures1

OBJECTID	SHAPE	TOWNSHIP	SECTION	PROP ID	OW NAME	OW ADD1	OW ADD2	DESCRIP
1	Point	RICHWOODS	33	42-09-230-007-00	Brado, James & Linda	28080 Spankey Ln	Fieldon, IL 62031	Plat of Nelson Block 1, Lot 07
7	Point	RICHWOODS	33	42-09-230-006-50	Burdell, Martha & Fred	28096 Spankey Ln	Fieldon, IL 62031	Plat of Nelson Block 1, Lot 06
9	Point	RICHWOODS	33	42-09-230-008-00	VACANT	Vacant	Fieldon, IL 62031	Plat of Nelson Block 1, Lot 08
12	Point	RICHWOODS	33	42-09-231-002-00	Kimbrel, Clifford	28174 Spankey Ln	Fieldon, IL 62031	Plat of Nelson Block 1, Lot 10
14	Point	RICHWOODS	33	42-09-230-009-00	Squires, Harry & Pam	28290 Spankey Ln	Fieldon, IL 62031	Plat of Nelson Block 1, Lot 09
15	Point	RICHWOODS	33	42-09-230-001-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 01
16	Point	RICHWOODS	33	42-09-231-006-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 13
17	Point	RICHWOODS	33	42-09-231-013-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 20
18	Point	RICHWOODS	33	42-09-231-012-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 18 EAST
20	Point	RICHWOODS	33	42-09-231-012-50			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 19
21	Point	RICHWOODS	33	42-09-231-010-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 18 WEST
24	Point	RICHWOODS	33	42-09-240-010-00			Fieldon, IL 62031	Plat of Peters Park Block 1, Lot 10
25	Point	RICHWOODS	33	42-09-230-002-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 02 & 03
26	Point	RICHWOODS	33	42-09-230-004-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 04
28	Point	RICHWOODS	33	42-09-230-005-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 05
30	Point	RICHWOODS	33	42-09-231-003-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 11
31	Point	RICHWOODS	33	42-09-231-004-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 12
32	Point	RICHWOODS	33	42-09-231-005-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 15
33	Point	RICHWOODS	33	42-09-231-007-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 14
34	Point	RICHWOODS	33	42-09-231-008-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 16
35	Point	RICHWOODS	33	42-09-231-009-00			Fieldon, IL 62031	Plat of Nelson Block 1, Lot 17
36	Point	RICHWOODS	33	42-09-240-009-00			Fieldon, IL 62031	Plat of Peters Park Block 1, Lot 09
42	Point	ROSEDALE	6	42-10-206-003-00			Fieldon, IL 62031	Plat of OtterCreek Block 01, Lot 01
43	Point	ROSEDALE	6	42-10-206-004-00			Fieldon, IL 62031	Plat of OtterCreek Block 01, Lot 02
44	Point	ROSEDALE	6	42-10-206-005-00			Fieldon, IL 62031	Plat of OtterCreek Block 01, Lot 03

Select by Attributes

Enter a WHERE clause to select records in the table window.

Method: Create a new selection

[PANEL]
[ZONE_] [IN_OUT] [BFE] [REQUIRED] [LOWEST_FL]

= <> Like > >= And < <= Or ? * () Not Is Get Unique Values Go To:

SELECT * FROM DatasetStructures1 WHERE:
[LOWEST_FL] >=440

Clear Verify Help Load... Save... Apply Close

FarmlandProtection
Soil Data
Fire_Districts
Townships
County Board Districts
17th Congressional District
19th Congressional District
97th State Legis
111th Leg Dist
Grafton Voting Districts
low flights
 high flights

Display Selection CAD Layers

Drawing Arial

2243784.95 952626.41 Feet

start GIS_Floodplain... Microsoft Power... Clip Art Downloa... USGS Real-Time... untitled - Paint Microsoft Clip Ga... 3:06 PM

The Elevation Certificate

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires March 31, 2012

Important: Read the instructions on pages 1-9.

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: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> 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) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade _____		A9. For a building with an attached garage: a) Square footage of attached garage _____ sq ft b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A8.b _____ sq in		c) Total net area of flood openings in A9.b _____ sq in
d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No		d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> 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. <input type="checkbox"/> FIS Profile <input type="checkbox"/> FIRM Community Determined <input type="checkbox"/> Other (Describe) _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other (Describe) _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Designation Date _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA <input type="checkbox"/> Yes <input type="checkbox"/> No					

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)	
C1. Building elevations are based on: <input type="checkbox"/> Construction Drawings* <input type="checkbox"/> Building Under Construction* <input type="checkbox"/> 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, ARIA, ARIAE, ARIA1-A30, ARIA/H, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE.	
Benchmark Utilized _____ Vertical Datum _____	
Conversion/Comments _____	

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

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.			
<input type="checkbox"/> Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Certifier's Name	License Number	PLACE SEAL HERE	
Title	Company Name		
Address	City State ZIP Code		
Signature	Date Telephone		

IMPORTANT: In these spaces, copy the corresponding information from Section A.			For Insurance Company Use:
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.			Policy Number
City	State	ZIP Code	Company NAIC Number

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)	
Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.	
Comments _____	
Signature _____	Date _____ <input type="checkbox"/> Check here if attachments

SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)	
For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.	
E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG). a) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the HAG. b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the LAG.	
E2. For Building Diagrams 8-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8-9 of instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the HAG.	
E3. Attached garage (top of slab) is _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the HAG.	
E4. Top of platform of machinery and/or equipment servicing the building is _____ <input type="checkbox"/> feet <input type="checkbox"/> meters <input type="checkbox"/> above or <input type="checkbox"/> below the HAG.	
E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown. The local official must certify this information in Section G.	

SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION			
The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge.			
Property Owner's or Owner's Authorized Representative's Name _____			
Address _____	City _____	State _____	ZIP Code _____
Signature _____	Date _____	Telephone _____	
Comments _____ <input type="checkbox"/> Check here if attachments			

SECTION G - COMMUNITY INFORMATION (OPTIONAL)		
The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 and G9.		
G1. <input type="checkbox"/> The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)		
G2. <input type="checkbox"/> A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.		
G3. <input type="checkbox"/> The following information (Items G4-G9) is provided for community floodplain management purposes.		
G4. Permit Number _____	G5. Date Permit Issued _____	G6. Date Certificate Of Compliance/Occupancy Issued _____
G7. This permit has been issued for: <input type="checkbox"/> New Construction <input type="checkbox"/> Substantial Improvement		
G8. Elevation of as-built lowest floor (including basement) of the building _____ <input type="checkbox"/> feet <input type="checkbox"/> meters (PR) Datum _____		
G9. BFE or (in Zone AO) depth of flooding at the building site _____ <input type="checkbox"/> feet <input type="checkbox"/> meters (PR) Datum _____		
G10. Community's design flood elevation _____ <input type="checkbox"/> feet <input type="checkbox"/> meters (PR) Datum _____		

Local Official's Name _____	Title _____
Community Name _____	Telephone _____
Signature _____	Date _____
Comments _____	

What About The Date??

- FEMA's new Elevation Certificate (EC) was approved for use, effective March 16, 2009, through March 31, 2012.
- The new EC will be phased in on a voluntary basis until March 31, 2010.
- Existing (older) Elevation Certificates may be used until March 31, 2010.
- Elevations certified on or after April 1, 2010, must be submitted on the new form.

Section A

What's New

Identify whether the enclosure, crawlspace, or garage has engineered flood openings.

Two new Building Diagrams have been added:

- 1. The new Diagram 1B is for raised-slab-on-grade or slab-on-stem-wall-with-fill single- and multiple-floor buildings.**
- 1. The new Diagram 9 is for all buildings (other than split-level) elevated on a subgrade crawlspace.**

Section C – Building Elevation Information

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-g below according to the building diagram specified in Item A7.

Benchmark Utilized Vertical Datum

Conversion/Comments

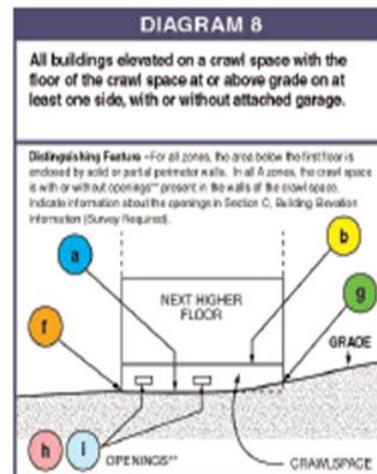
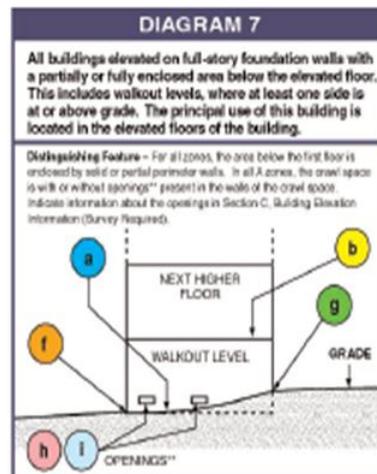
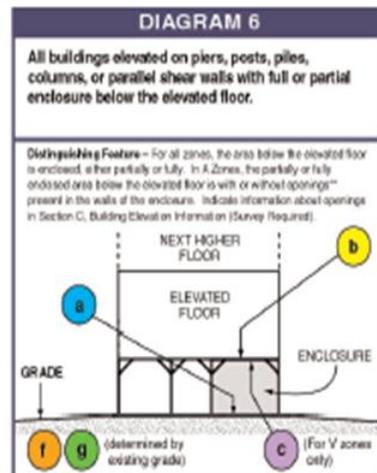
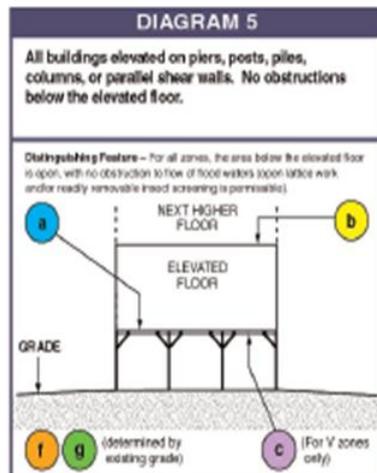
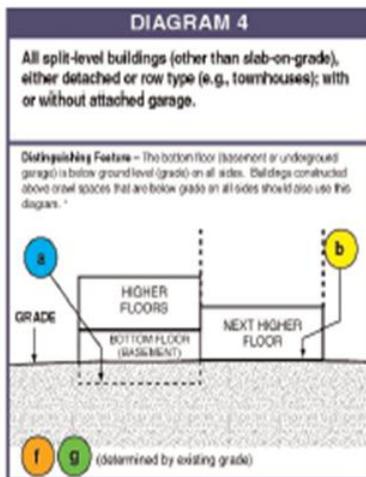
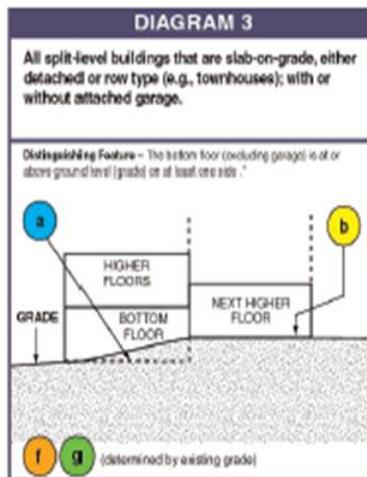
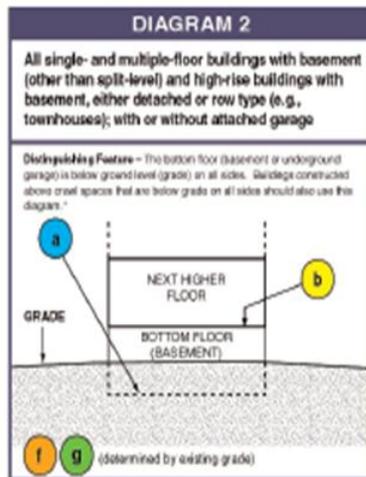
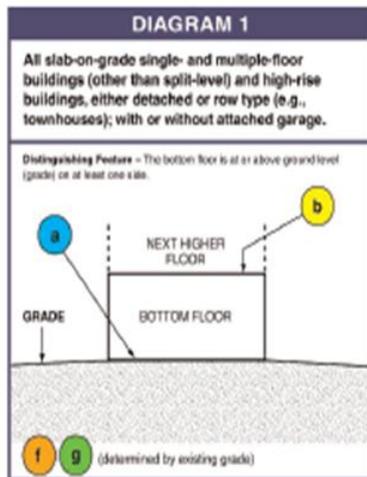
Check the measurement used.

- | | | | |
|--|---|-------------------------------|--|
| a) Top of bottom floor (including basement, crawl space, or enclosure floor) | <input type="text"/> . <input type="text"/> | <input type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| b) Top of the next higher floor | <input type="text"/> . <input type="text"/> | <input type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| c) Bottom of the lowest horizontal structural member (V Zones only) | <input type="text"/> . <input type="text"/> | <input type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| d) Attached garage (top of slab) | <input type="text"/> . <input type="text"/> | <input type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| e) Lowest elevation of machinery or equipment servicing the building
(Describe type of equipment in Comments) | <input type="text"/> . <input type="text"/> | <input type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| f) Lowest adjacent (finished) grade (LAG) | <input type="text"/> . <input type="text"/> | <input type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| g) Highest adjacent (finished) grade (HAG) | <input type="text"/> . <input type="text"/> | <input type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |

BUILDING DIAGRAMS

The following eight diagrams illustrate various types of buildings. Compare the features of the building being certified with the features shown in the diagrams and select the diagram most applicable. Enter the diagram number in Item C2 and the elevations in Items C3a-C3g.

In A zones, the floor elevation is taken at the top finished surface of the floor indicated; in V zones, the floor elevation is taken at the bottom of the lowest horizontal structural member (see drawing in instructions for Section C).



** An "opening" (flood vent) is defined as a permanent opening in a wall that allows for the free passage of water automatically in both directions without human intervention. Under the NFIP, a minimum of two openings is required for enclosures or crawl spaces with a total net area of not less than one square inch for every square foot of area enclosed. Each opening must be on different sides of the enclosed area. If a building has more than one enclosed area, each area must have openings on exterior walls to allow floodwater to directly enter. The bottom of the openings must be no higher than one foot above the grade underneath the flood vents. Alternatively, you may submit a certification by a registered professional engineer or architect that the design will allow for the automatic equalization of hydrostatic flood forces on exterior walls. A window, a door, or a garage door is not considered an opening.

* A floor that is below ground level (grade) on all sides is considered a basement even if the floor is used for living purposes, or as an office, garage, workshop, etc.



FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM

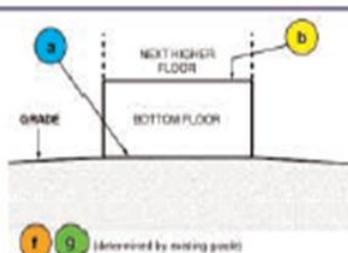
Elevation Certificate

Building Diagram 1
Example Photographs

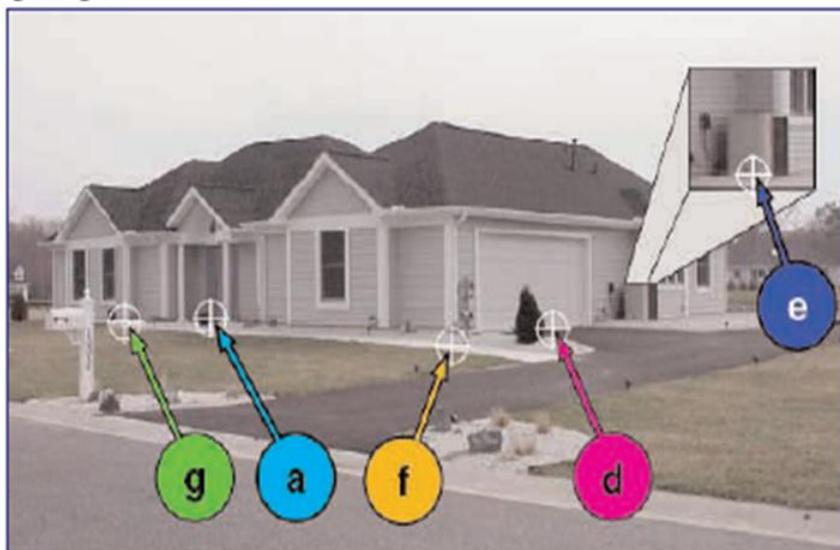
DIAGRAM 1

All slab-on-grade single- and multiple-floor buildings (other than split-level) and high-rise buildings, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor is at or above ground level (grade) on at least one side.



Slab-on-grade, one story building with attached garage.



-  Top of bottom floor (measure at doorsill)
-  Attached garage (measure at top of slab)
-  Elevation of machinery and equipment (measure at top of platform)
-  Lowest adjacent finished grade
-  Highest adjacent finished grade
-  and  Indicate No Openings in the garage
-  and  Not Applicable

Section A – Property Information Openings

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires February 28, 2009

Important: Read the instructions on pages 1-8.

SECTION A - PROPERTY INFORMATION		For Insurance Company Use:
A1. Building Owner's Name <input type="text"/> 65%		Policy Number
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. <input type="text"/>		Company NAIC Number
City <input type="text"/> State <input type="text"/> ZIP Code <input type="text"/>		
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) <input type="text"/>		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <input type="text"/>		
A5. Latitude/Longitude: Lat. <input type="text"/> Long. <input type="text"/>		Horizontal Datum: <input type="checkbox"/> NAD 1927 <input type="checkbox"/> 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 <input type="text"/>		
A8. For a building with a crawl space or enclosure(s), provide	A9. For a building with an attached garage, provide:	
a) Square footage of crawl space or enclosure(s) <input type="text"/> sq ft	a) Square footage of attached garage <input type="text"/> sq ft	
b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade <input type="text"/>	b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade <input type="text"/>	
c) Total net area of flood openings in A8.b <input type="text"/> sq in	c) Total net area of flood openings in A9.b <input type="text"/> sq in	

Copies of the Elevation Certificate

Download from:

<http://www.fema.gov/>

or

simply go to www.FEMA.gov and
search “elevation certificate”

National Flood Insurance Program (NFIP)

➤ Now covers 5.1 million policies in 20,000 communities.

➤ \$994 billion in risk exposure (almost all high risk properties).



- In floodplains - less than 50% coverage.
- In all risk zones – less than 10% coverage.
- Adverse selection – only those who need it buy it.

Flood Insurance Coverage

	<u>Structure</u>	<u>Content</u>
Single Family Home	\$250,000	\$100,000
Non-Residential	\$500,000	\$500,000

- Waiting period 30 days
- Insurance required if Disaster Assistance is received

Insurable Property



Definition of an eligible building

- 2 or more outside rigid walls
- A fully secured roof
- Permanently affixed to a site
- At least 51% of ACV above ground
- Could be manufactured home or travel trailer if it meets above criteria

NFIP Does NOT Cover

- Basement improvements
- Basement personal belongings
- Structures built over water



Who Can Buy Flood Insurance?

- Anybody in a community participating in the NFIP.
- Anywhere within that community (all zones)



Who MUST buy Flood Insurance?

➤ Required for buildings in SFHA (floodplain) when:

- Making
- Increasing
- Renewing
- Extending

a mortgage, home equity, improvement, construction, commercial or farm credit loan

Remember MIRE

Who MUST Buy Flood Insurance?

Community Status

Does the community participate in the NFIP?
Is insurance available?

Type of Loan

Is the lender Federally regulated?

Type of Property

Is it an insurable structure?

Location of Property

Is it located within a floodplain?

How Much Coverage is Required?

- **Amount of the loan at initiation**
- or**
- **Maximum available through the NFIP**
- or**
- **Value of building at loan origination**
- **Whichever is less**



Lender's Responsibility

Insurance is required when:

- A lender makes, renews, extends, or increases a loan.
- That loan is from a federally regulated or insured lender
- The loan collateral is insurable under the NFIP's standard policy.
- That collateral is or will be located in a high risk flood area (A Zone)
- The community participates in the NFIP.

Lenders Documentation

“a lender’s decision made in the exercise of due diligence and good faith as to the location of a property, which is the subject of the loan, on such a map will be final and sufficient to comply with the Act”.

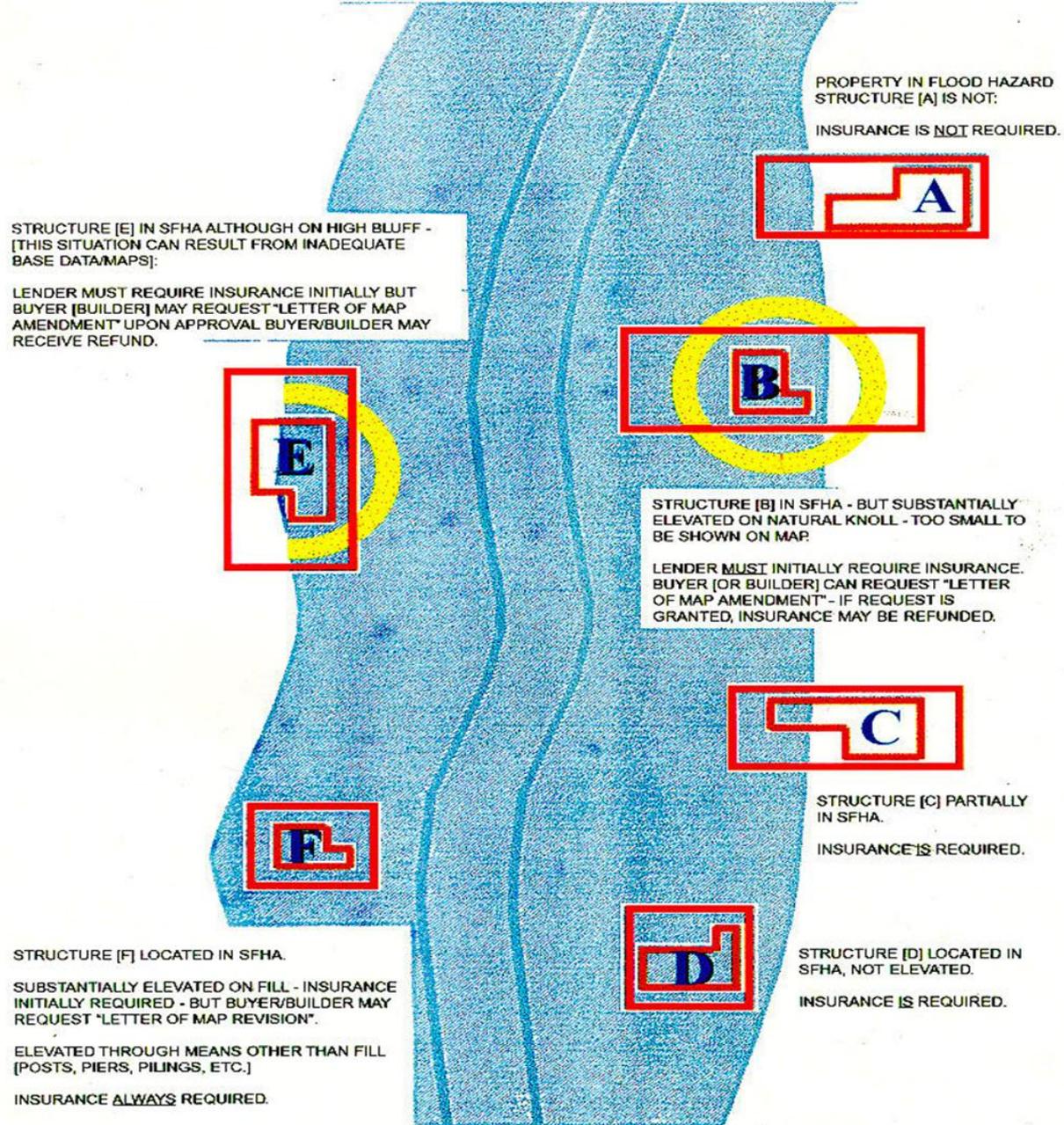
Do lenders HAVE to depend on the Zone Determination Company’s floodplain determination?

NO!

Flood “Certification” Vendors

- Not FEMA endorsed
- Essentially unregulated industry
- Approx 150 firms but only 1/3 subscribe to NFDA standards and practices
- Quality control issues
- What are they *really* determining ?

Flood Insurance Requirements For Typical Residential Sitings In FEMA/HUD Designated Special Flood Areas



Waiting Period

- 30-day waiting period between purchase of flood insurance and coverage
- Exceptions include:
 - Mandatory purchase
 - Map revision

Deductibles

Standard

- \$1,000

Post FIRM

-\$2,000

Pre FIRM

Higher deductibles available for lower premiums

Separate deductible for building and contents

Comparison Cost of Flood Insurance

Existing Pre-FIRM House



\$887/year
\$26,610 /loan

VS



\$887/year
\$26,610/loan

VS



\$887/year
\$26,610/loan

Based on \$75,000 bldg. & \$20,000 contents coverage. Single family, no basement, standard deductible

Comparison cost of Flood Insurance

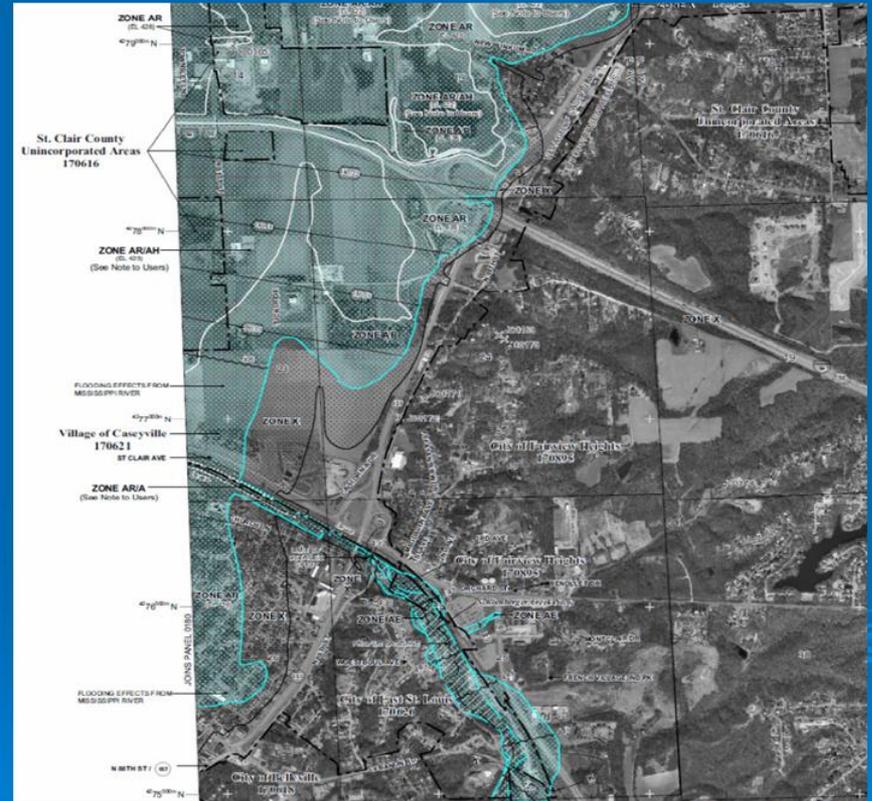
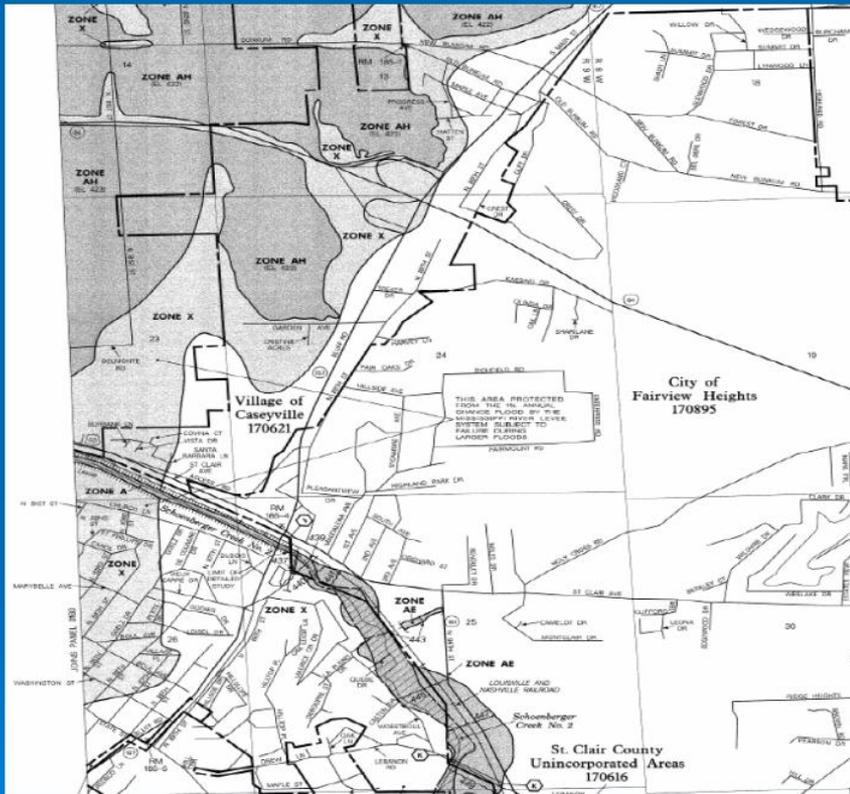


The Preferred Risk Policy (PRP)

- Written only for areas located outside of the mapped floodplain (B,C and X Zones)
- Sold in “packaged” coverage amounts. Very cheap!

Building Type	Building Coverage	Contents Coverage	Annual Premium
Residential w/o basement	\$30,000	\$12,000	\$150
Residential with basement	\$30,000	\$12,000	\$175
Non-Residential w/o basement	\$50,000	\$50,000	\$557

PRP Extension



PRP Extension

- Effective January 1, 2011, buildings that are newly designated within a Special Flood Hazard Area due to a map revision are eligible for coverage under PRP for a period of up to 2 years after the effective date of the map.

October 1, 2010 NFIP Rate Changes

Post FIRM A1-30 and AE Zones	Premium will increase 6%
Pre-FIRM AE Zones	Premium will increase 3%
AO, AH, AOB and AHB Zones	Premium will increase 1%
Unnumbered A Zones Where elevations have not been determined	Premium will increase 5%
A99 Zones and AR Zones	Premium will increase 9%

How can Homeowners reduce the cost of their Flood Insurance?

- With lenders approval, increase the amount of deductible
 - If location of the structure is a close call, apply for Letter of Map Amendment
 - Mitigate to reduce vulnerability
- 



**David Schein, Senior Natural Hazards Specialist
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**Rich Slevin
Senior Territory Training Manager
National Flood Insurance Program
H2O Partners, Inc.
2900 N. Quinlan Park Rd., Suite 240-135
Austin, TX 78732
888.318.5112
rich@h2opartnersusa.com**



**NATIONAL
FLOOD
INSURANCE
PROGRAM**

**“We Can’t Replace Your
Memories ...
But We Can Help You
Build New Ones”**

EXPLODING THE MYTHS:

- **Flood Insurance does not cover basements.**
- **You can only buy flood insurance in the floodplain.**
- **Federal disaster assistance will cover your damages.**
- **You can’t buy flood insurance during a flood.**
- **Flood Insurance is only available from the government.**

FLOODPLAIN MANAGEMENT & ITS EFFECTS ON FLOOD INSURANCE



Building Construction:

- Get it right and insurance premiums will be affordable
- Get it wrong and premiums will be very expensive
- Exceed minimum standards and insurance will be relatively cheap

Community Audits

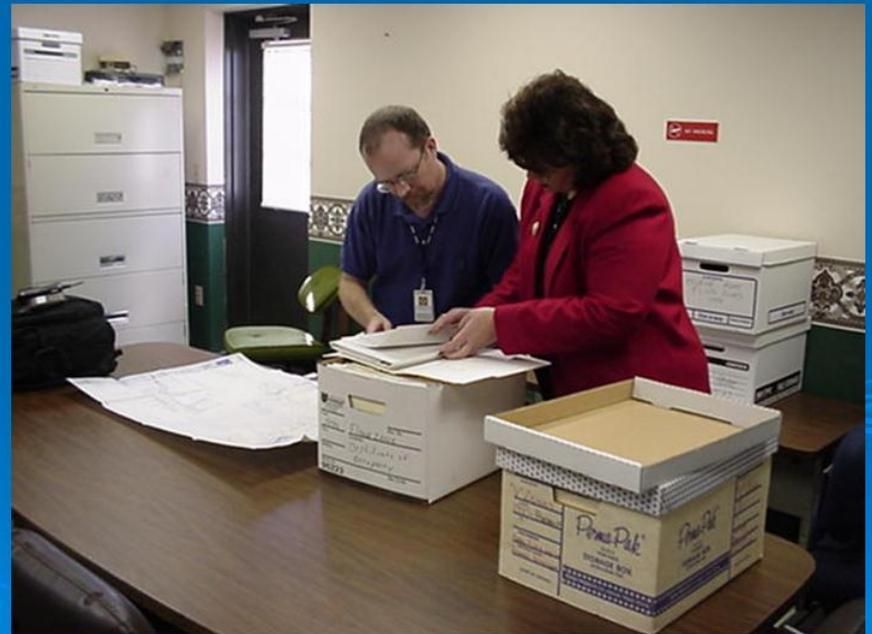
Illinois
LEADS THE
NATION
in the
number of
communities
kicked out of
the National
Flood
Insurance
Program



I'm here to see your
Floodplain Permit files

Community Assistance Visit

The CAV provides a means to render technical assistance and a process to correct program deficiencies and violations.



Community Assistance Visit

Possible Violations

Examples of deficiencies and violations.....

- Failure to require ANY permits;
- Failure to obtain state floodway permit;
- Failure to use proper flood elevation data;
- Non-compliant ordinance;
- Structures below BFE;
- HVAC or electric components not elevated;
- Failure to correct violations to practicable extent;
- Pattern & practice of issuing non-compliant variances;
- Allowing non-compliant lower enclosures or no vents;
- Fill and debris.

Community Assistance Visit



Community Assistance Visit (cont.)

IF YOU CAN'T GET THE WHOLE THING, GET WHAT YOU CAN REASONABLY AND PRACTICALLY GET, to limit flood damage exposure to people and property. Save your community's good standing in the National Flood Insurance Program!

WHO'S TO BLAME?

- The developer?
- The builder?
- The owner?
- The building official?
- The realtor?
- The prior administration?

WE DON'T CARE!!!!

Regardless of who is at fault, the violation must be corrected.

Probation

- Formal notification to the community that FEMA regards the community's floodplain management program as not compliant with the minimum standards of the NFIP.
- An additional \$50 dollar premium will be charged on policies sold or renewed during the probation period.
- The maximum probation period is one year.

Suspension

A community is subject to suspension unless it corrects program deficiencies and remedies all violations by the compliance deadlines set during the probation period.

Effects of Suspension or Non-Participation in the NFIP

- **No federally-backed flood insurance.**
- **No federal/state grants and loans.**
- **No federal flood disaster assistance.**
- **No federal mortgage insurance.**

If a Variance is Issued

A community must

- Maintain a record of all variance actions, including those denied, along with the justifications (findings of fact).
- Report such actions in Biennial Report to FEMA.

A Word of Advice...



DO NOT GRANT VARIANCES!

They place people and property at risk, and flood insurance costs sky-rocket.

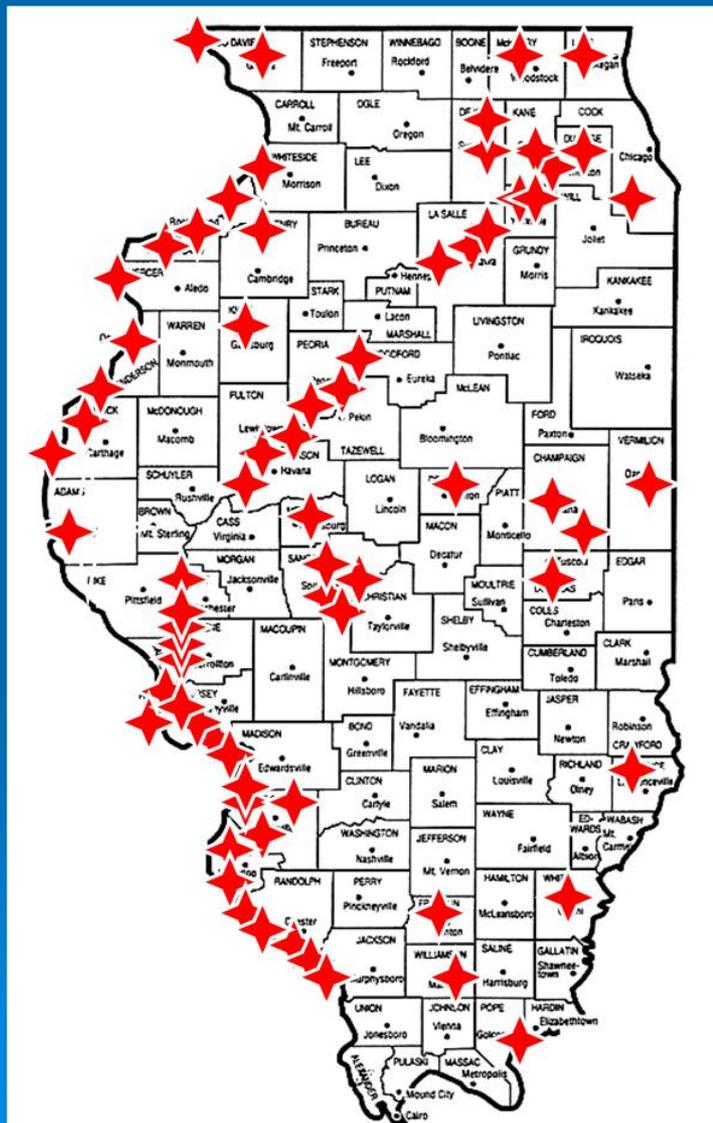
If you're going to grant a variance be sure to **DOCUMENT!**...

...This is the community's only protection after the flood when damages have occurred.

Mitigation Works!

3,500 Buyouts

Adams County	23
Aurora	25
Aurora Township	3
Bath	8
Belleville	52
Birds	67
Birds Bridge	15
Browning	54
Calhoun County	70
Carmi	32
Champaign County	1
Chatham	9
Cleveland	21
Clinton	38
Danville	23
DeKalb	6
DuPage County	49
East Dubuque	8
East St. Louis	572
Elizabethtown	2
Elsah	2
Evansville	18
Fults	25
Grafton	106
Greene County	113
Hamburg	3
Hancock County	54
Hardin	43
Havana	44
Hillview	15
Jersey County	93
JoDaviess County	2
Kampsville	13
Kaskaskia	6
Keithsburg	110
Kendall County	7



Kirkland	65
Knox County	17
LaSalle County	14
Lake County	53
Madison County	47
Marion	46
Mason County	28
McHenry County	1
Montgomery	39
Monroe County	1,400
Oquawka	32
Ottawa	57
Palos Hills	3
Pawnee	3
Pearl	4
Peoria	14
Peoria County	100
Peoria Heights	23
Petersburg	42
Pike County	33
Pontoosuc	20
Randolph County	24
Riverside	10
Riverton	6
Rock Island County	63
Rockwood	11
Rocky Run	12
Sangamon County	61
Shorewood	47
Sidney	10
St. Clair County	270
Thebes	1
Valmeyer	244
Villa Grove	15
Warsaw	5
West Frankfort	31
Whiteside County	8

Grafton, Illinois...my favorite city!



City of Ottawa



**1982. The Ottawa “flats”.
Under water.**



**2008. The same Ottawa “flats”
After buyouts.**

Mitigation Grant Programs

FEMA currently has 4 mitigation grant programs:

- Hazards Mitigation Grant Program (HMGP)
- Flood Mitigation Assistance (FMA)
- Pre-Disaster Mitigation (PDM)
- Repetitive Flood Claims (RFC)

- ICC (part of the flood insurance policy)

Hazard Mitigation Grant Program (HMGP)

- FEMA allocates a percentage of the total disaster assistance generated in response to a Presidential declaration toward HMGP.
- Program is administered by the State.
- Cost share with the State/Local Community.
- Voluntary and Competitive (No Guarantee).
- Projects must meet benefit-cost, environmental and other Federal, State and local criteria.
- 4 Priorities: Mitigation Plan, Rep Loss, Sub Dam, & primary residence

Flood Mitigation Assistance (FMA)

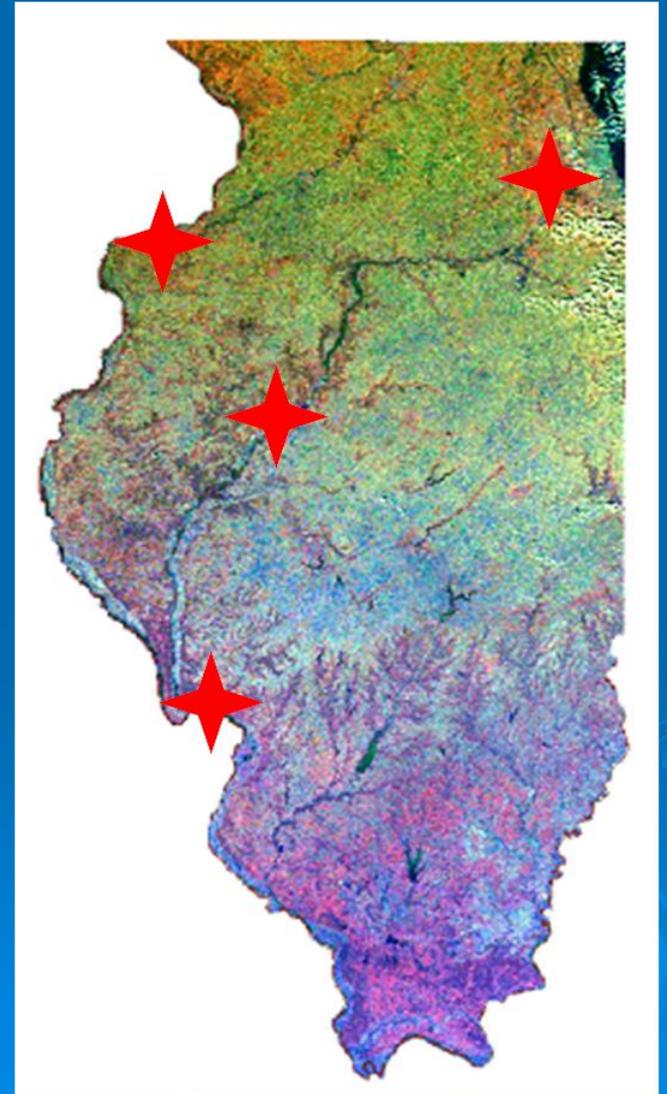
- Yearly Allocation from Insurance Policy Base.
- Requires Mitigation Plan.
- Administered by the State.
- Repetitive Loss properties are targeted.
- Community needs to be in good standing in the NFIP.
- Applied to insured structures only.
- Voluntary and Competitive (No Guarantee).

Pre-Disaster Mitigation Program (PDM)

- Provides technical and financial assistance to States and communities for pre-disaster hazard mitigation activities that complement a comprehensive mitigation program.
- FEMA provides grants for mitigation activities such as planning and the implementation of projects identified through the evaluation of natural hazards.

Rep Loss in Illinois

- **2,815 rep loss properties (5.5% of 50,000 policies)**
- **\$67 million in total rep. loss payments (31% of our total claims)**
- **Located in in 303 communities**
- **1993 - #5 on the national list!**
- **2007- #15 on the national list!**
- **Most greivous remaining Rep Loss properties are located on Federal lease property.**



Repetitive Loss

- Four or more separate claim payments of more than \$5,000 each (including building and contents payments); or
- Two or more separate claim payments (building payments only) where the total of the payments exceeds the current market value of the property.

Repetitive Flood Claims (RFC) Program

- Must be a NFIP Community.
- \$10 Million available annually.
- Priority is Rep. Loss.
- Eligible up to 100% Federal cost.

Severe Repetitive Loss (SRL) Program

- Same rules as RFC.
- \$40 million available annually.
- Priority is severe rep loss.
- Prioritized to those with the greatest savings to the NFIP based on a benefit/cost analysis.

Mitigation Planning

- Communities must have mitigation plans to be eligible for Federal Mitigation projects. (DMA 2000).
- Approved plans by April 2005.

Natural Hazards Mitigation Plan

Kane County, Illinois



Natural Hazards Mitigation Planning Committee



IEMA Point of Contact

Ron Davis
State Mitigation Officer
Illinois Emergency Management Agency
1035 Outer Park Drive
Springfield, IL 62704

217-524-1003

Ron.Davis@illinois.gov

Community Rating System (CRS)

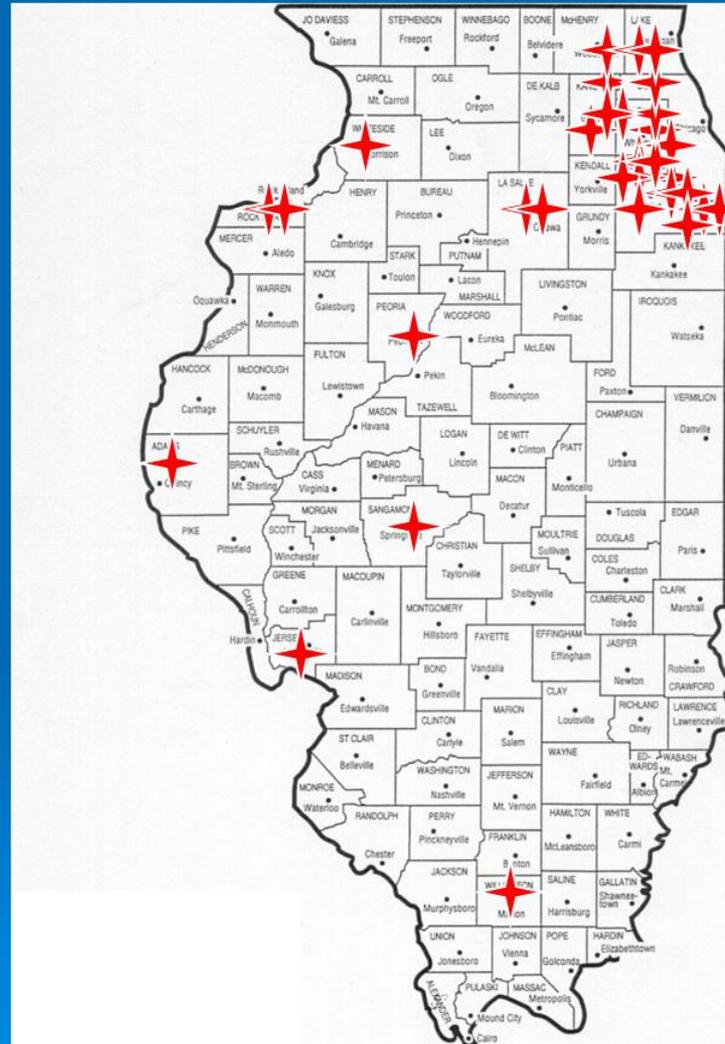


Exceeding the
Requirement for
NFIP Participation

Another way to
reduce the cost of
a flood policy!

Community Rating System in Illinois (43 Communities)

Adams County
Addison
Bartlett
Calumet City
Carbondale
Champaign
Country Club Hills
Deerfield
DeKalb City
Des Plaines
Downers Grove
Flossmoor
Glendale Heights
Hampshire
Hoffman Estates
LaSalle County
Lansing
Lincolnshire
Lisle
Moline
Mount Prospect



Naperville
North Utica
Northbrook
Oak Brook
Orland Hills
Ottawa
Palatine
Peoria County
Prospect Heights
Rock Island County
Sangamon County
South Holland
St. Charles
Tinley Park
Wheeling
Willowbrook
Whiteside County
Wood Dale
Woodstock

CRS in Illinois

- Ranked #6 in the nation for participation
- Six communities are class 5 or better
- Only four communities in the nation with higher CRS ratings.
- 40% of all flood insurance policies in Illinois are subject to CRS discounts.

Incentive



CRS provides an incentive for communities to initiate new flood protection activities.

CRS Activities

➤ *300 Public Information Activities*

- 310 Elevation Certificates
- 320 Map Information
- 330 Outreach Projects
- 340 Hazard Disclosure
- 350 Flood Protection Information
- 360 Flood Protection Assistance



CRS Activities

➤ *400 Mapping & Regulatory Activities*

- 410 Additional Flood Data
- 420 Open Space Preservation
- 430 Higher Regulatory Standards
- 440 Flood Data Maintenance
- 450 Stormwater Management



CRS Activities

- *500 Flood Damage Reduction Activities*
 - 510 Floodplain Management Planning
 - 520 Acquisition and Relocation
 - 530 Flood Protection
 - 540 Drainage System Maintenance



CRS Activities

➤ *600 Flood Preparedness Activities*

- 610 Flood Warning Program
- 620 Levee Safety
- 630 Dam Safety



CRS Premium Discounts

<u>Class</u>	<u>Points</u>	<u>Discount</u>
9	500-999	5%
8	1000-1499	10%
7	1500-1999	15%
6	2000-2499	20%
5	2500-2999	25%
4	3000-3499	30%
3	3500-3999	35%
2	4000-4499	40%
1	4500+	45%

ISO Representative for Illinois

Scott W. Cofoid, CFM
Insurance Services Office
1126 Schuyler Street
Peru, Illinois 61354
(217) 787-0584
scofoid@iso.com



FEMA Point of Contact

Frank Shockey
Natural Hazard Specialist
536 South Clark Street
Chicago, IL 60605-1521

312-408-5321

Frank.shockey@dhs.gov

IDNR/OWR Point of Contact:



Brian A. Eber

N. E. Floodplain Coordinator Manager

Illinois Department of Natural Resources/Water Resources

2050 Stearns Rd

Bartlett, IL

(847) 608-3100 ext 2059

brian.eber@illinois.gov

IF YOU REMEMBER ANYTHING, REMEMBER.....

1. Get your communities floodplain maps!
1-800-358-9616
2. Anything and everything is floodplain
“development”. Review Permits!
3. If it is in the floodway (or a floodplain with
no mapped floodway)...get a state permit
first.
4. If your community is in the NFIP, local
permits are required for any development.
5. Buildings must be elevated or floodproofed





THANK YOU

**A great View! Look at all that GREEN
in Grafton!**

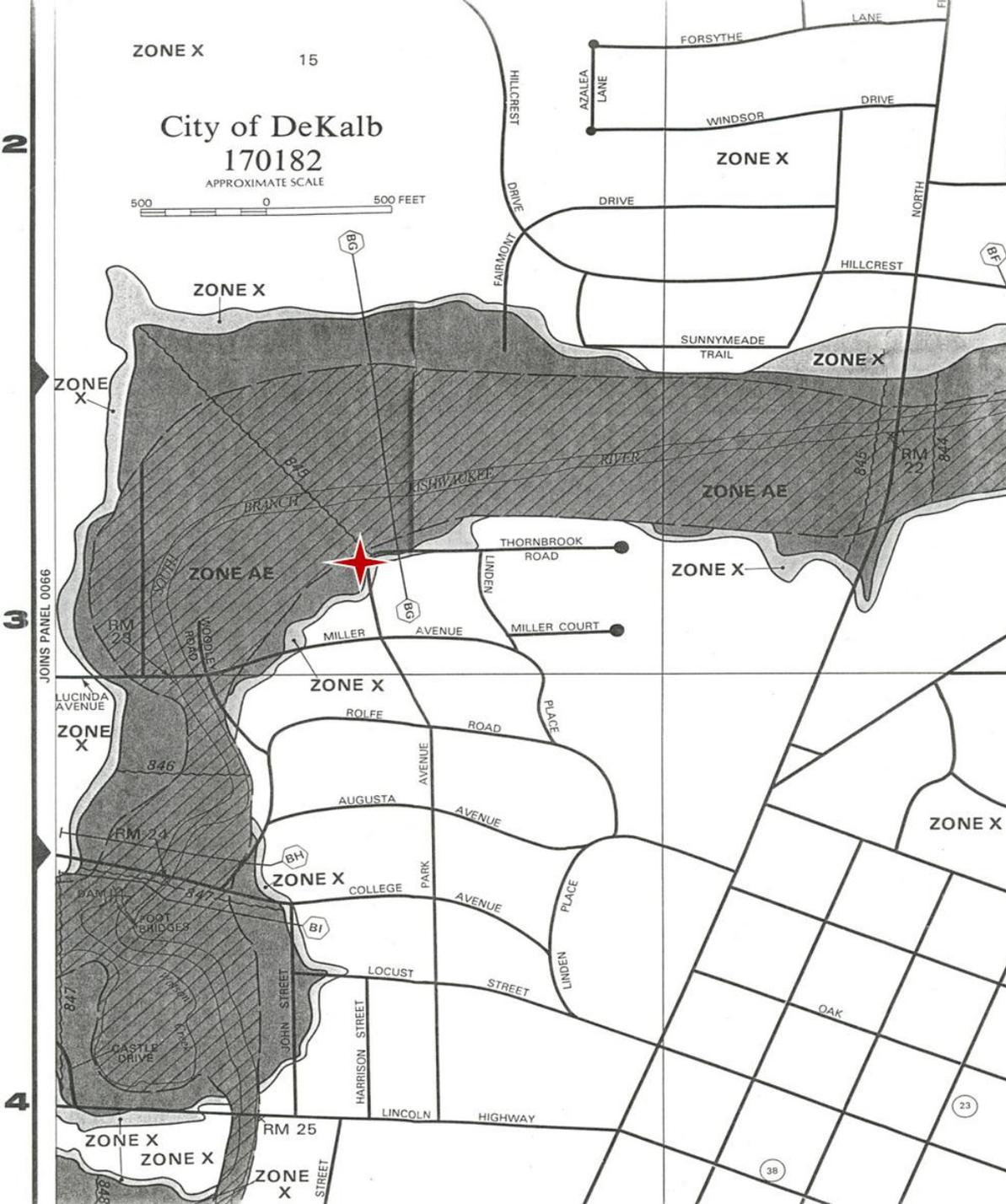


THANK YOU

Floodplain Exercise

Single family home located at 1212 Thornbrook Road (on the curve)

1. Floodplain?
2. Floodway?
3. Base Flood Elevation?
4. Construction method to use?



Floodplain Exercise

A single family home located at 512 Woodley Road (southeast corner of Woodley Road and Miller Avenue) has suffered fire damage. The owner wants to repair the home.

1. Floodplain?
2. Floodway?
3. Base Flood Elevation?
4. Construction method to be used?



Floodplain Exercise

A single family home is proposed at 1022 John Street (southwest corner of College Avenue and John Street)

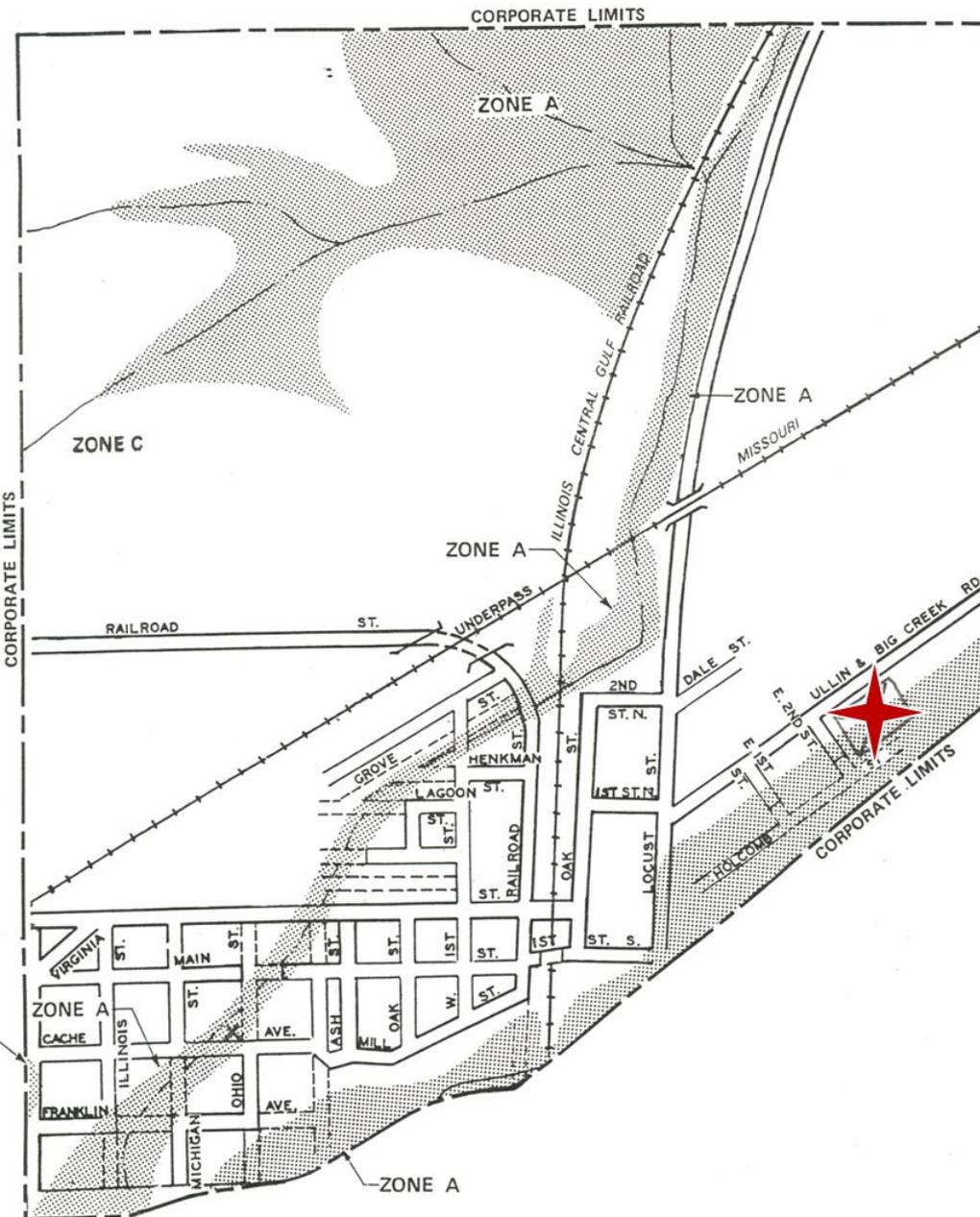
1. Floodplain?
2. Floodway?
3. Base Flood Elevation?
4. Lender zone determination?
5. Filling on lot?
6. Nursing home w/ basement?



Floodplain Exercise

Ullin is getting a new Super Walmart on the corner of Ullin Road and East 2nd Street!!!!

1. Floodplain?
2. Floodway?
3. Base Flood Elevation?
4. Construction methods to be used?



Floodplain Exercise

The Mayor of Ullin got a raise! He wants to do a \$100,000 improvement to his double-wide trailer. He lives on the corner of Ohio and Cache Street.

1. Floodplain?
2. Floodway?
3. State permit required?
4. Local permit required?
5. Base flood elevation?

