NATIONAL FLOOD INSURANCE PROGRAM

LOCAL OFFICIALS
SUBSTANTIAL DAMAGE WORKSHOP

June 2008

Welcome & Introduction

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Meeting Agenda

- NFIP Overview
- Substantial Damage Defined
- Inspection process
- Sources of financial help for owners

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The National Flood Insurance Program (NFIP)

A voluntary program based on a mutual agreement between the Federal government and the local community:

In exchange for **adopting** and **enforcing** a floodplain management ordinance, Federally-backed flood insurance is made available to property owners throughout the community.

NFIP Goals

- Reduce the loss of life and property caused by flooding
- Reduce rising disaster relief costs caused by flooding
- Maintain the natural and beneficial functions of the floodplains

Accomplishing NFIP Goals

- Publish maps - identify risk
- Educate the public on their own risk
- Provide federally-backed flood insurance coverage
- Encourage development away from the flooding risks

Basic NFIP Regulations

- Ensure that all proposed **development** is reasonable safe from flooding
- Ensure that the **lowest floor** of any **new** or **substantially damaged or improved** structure within the SFHA is elevated to or above the base flood elevation.
- Ensure that **development** within the Floodway does not increase flood heights.

Definition of Development

"...means **<u>any man-made change to improved or unimproved real estate</u>**, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

Definition of Lowest Floor

"...means the lowest floor of the lowest enclosed area, **<u>including basement</u>**.

Basement is defined by the NFIP as any area subgrade on all sides.

Definition of Substantial Damage

Damage of **<u>any origin</u>** sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred.

*In Wisconsin Equalized Assessed Value must be used for substantial damage and improvement determinations

Definition of Substantial Improvement

<u>Any</u> reconstruction, rehabilitation, addition, or other improvements of a structure, the cost of which equals or exceeds 50% of the equalized assessed valuation of the structure before the "start of construction" of the improvement.

NR116 Adds

- Dry Land Access
- Restrictions on new or reconstructed substantially damaged/improved structures in the floodway
- Elevation of new and substantially damaged/improved structures must be on fill

Who Puts this all Together in the Community?

The Local Floodplain Administrator

- Review permit applications
- Interpret boundaries and provide BFEs
- Determines Substantial Damage/Improvement
- Conducts inspections
- Takes Enforcement Action on violations
- Maintains documentation
- Provides information and guidance to citizens
- Shares information with Federal and State Partners

When to Conduct a Substantial Damage/Improvement Determination?

1. When the structure is within the Special Flood Hazard Area; and

2. Has been damaged by flood, fire, earthquake, wind or other manmade or natural causes **OR** has applied for a permit for an addition, rehabilitation, or other repairs/improvements to the structure.

Special Flood Hazard Area

SFHA's are the darkly shaded areas on a Flood Hazard Boundary Map or a Flood Insurance Rate Map. SFHA's represent the area of the base flood.

Definition of 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

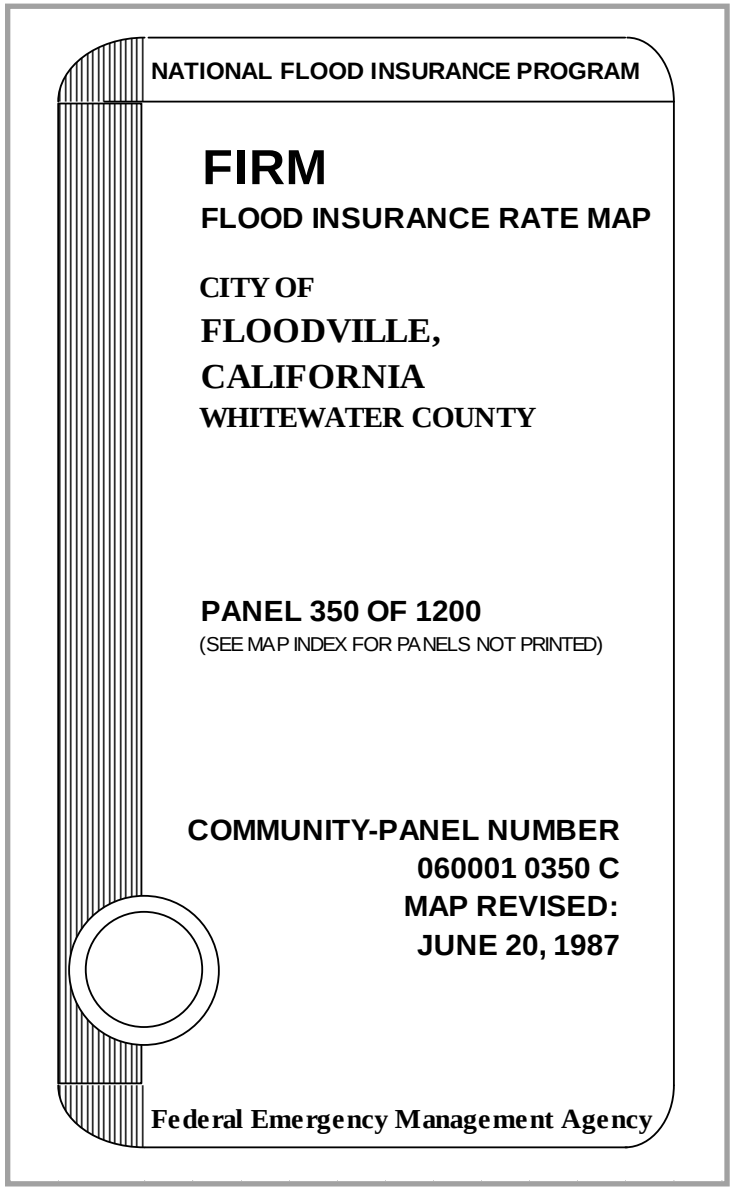
~~"100-year" flood.~~

"1% chance flood"

Riverine
Special Flood Hazard Areas

- **Zone A** - No BFE's determined.
- **Zone AE, A1-30** - BFE's determined.
- **Zone AH** - Flood depths of 1 to 3 feet (usually areas of ponding); BFE's determined.
- **Zone AO** - Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain; average depths determined.

Flood Insurance Rate Map (FIRM)



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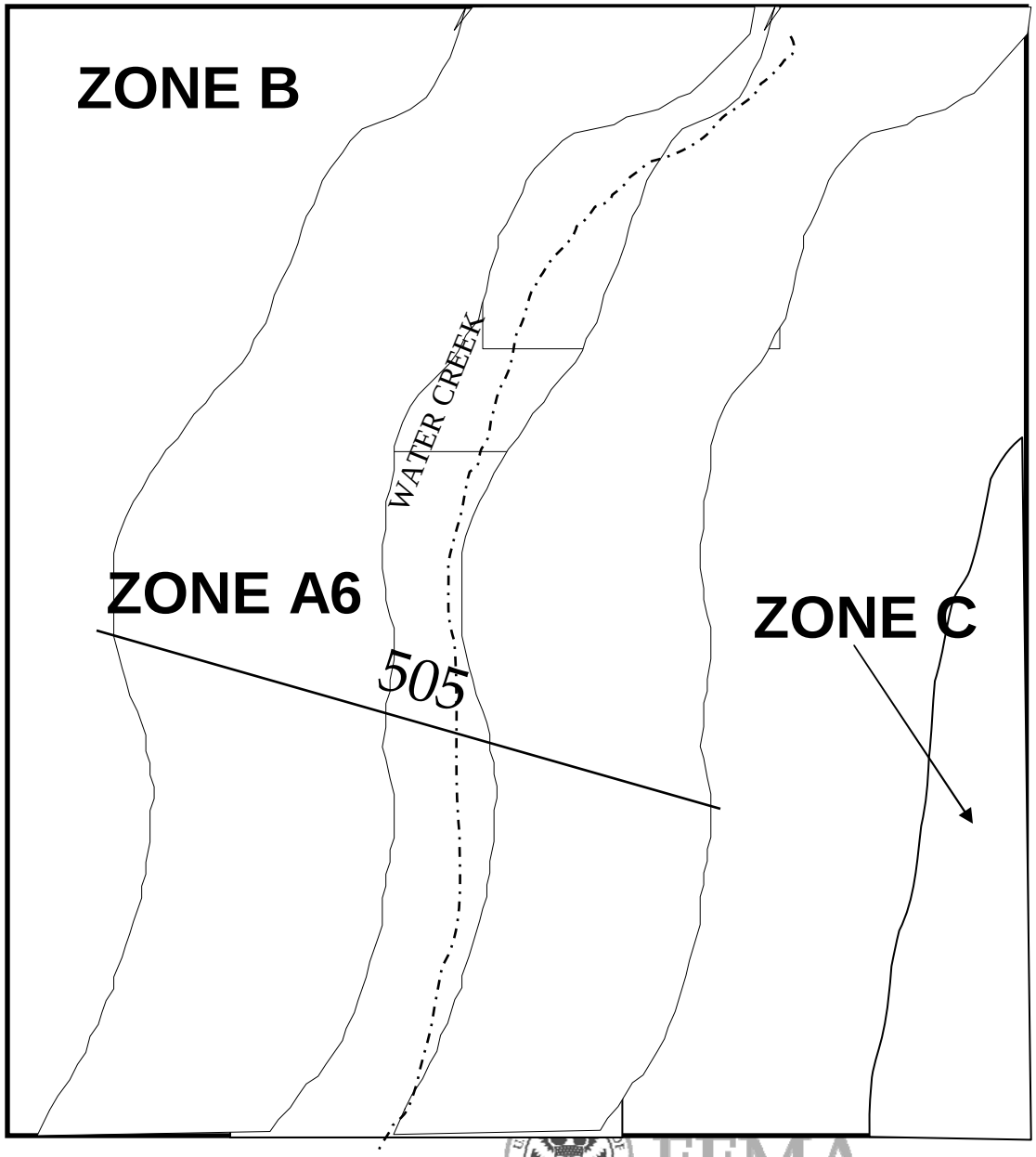
Flood Insurance Rate Map (FIRM)



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What is Needed for a Substantial Damage/Improvement Determination?

1. Pre-Damage/Improvement Equalized Assessed Valuation of the Structure **<u>excluding</u>** the land value.
2. Total Estimated Cost of the Improvements or Repairs to the structure (Plan and specification fees along with permit fees are not counted toward the cost of the improvements).

Cost of the Repair/Improvements

- Estimate from the design Architect
- Signed contracts for the work
- Estimate from a professional estimator
- Estimation process adopted by the community. (Substantial Damage Estimator, etc.)

What's Included in the Repair/Improvement Cost?

- Foundations, Piers, Pilings or Concrete Slabs
- Walls, tie beams and trusses
- Flooring and ceilings
- Windows and doors
- Roofing materials
- Plumbing and electrical including fixtures

Repair/Improvement Cost

- Cabinets
- Built in appliances
- Water filtration, conditioning or recirculation systems
- HVAC
- Labor costs (Including amounts estimated for volunteer labor or donated materials).
- Overhead & profit

Excluded Items from the Repair/Improvement Cost

- Land
- Plan and Specification Costs
- Permit Fees
- Survey Cost
- Generally clean-up (removal of mud, building dry out, etc.)

Calculate the Percentage

$$\frac{\text{Cost of the Repair/Improvement}}{\text{Equalized Assessed Valuation}} \times 100 = \text{Repair/Improvement Percentage}$$

When…..

Repair/Improvement Percentage > or = 50%

You have a Substantially Damaged or Improved Structure…….

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So What Do We Do with those Substantially Damaged or Improved Structures?

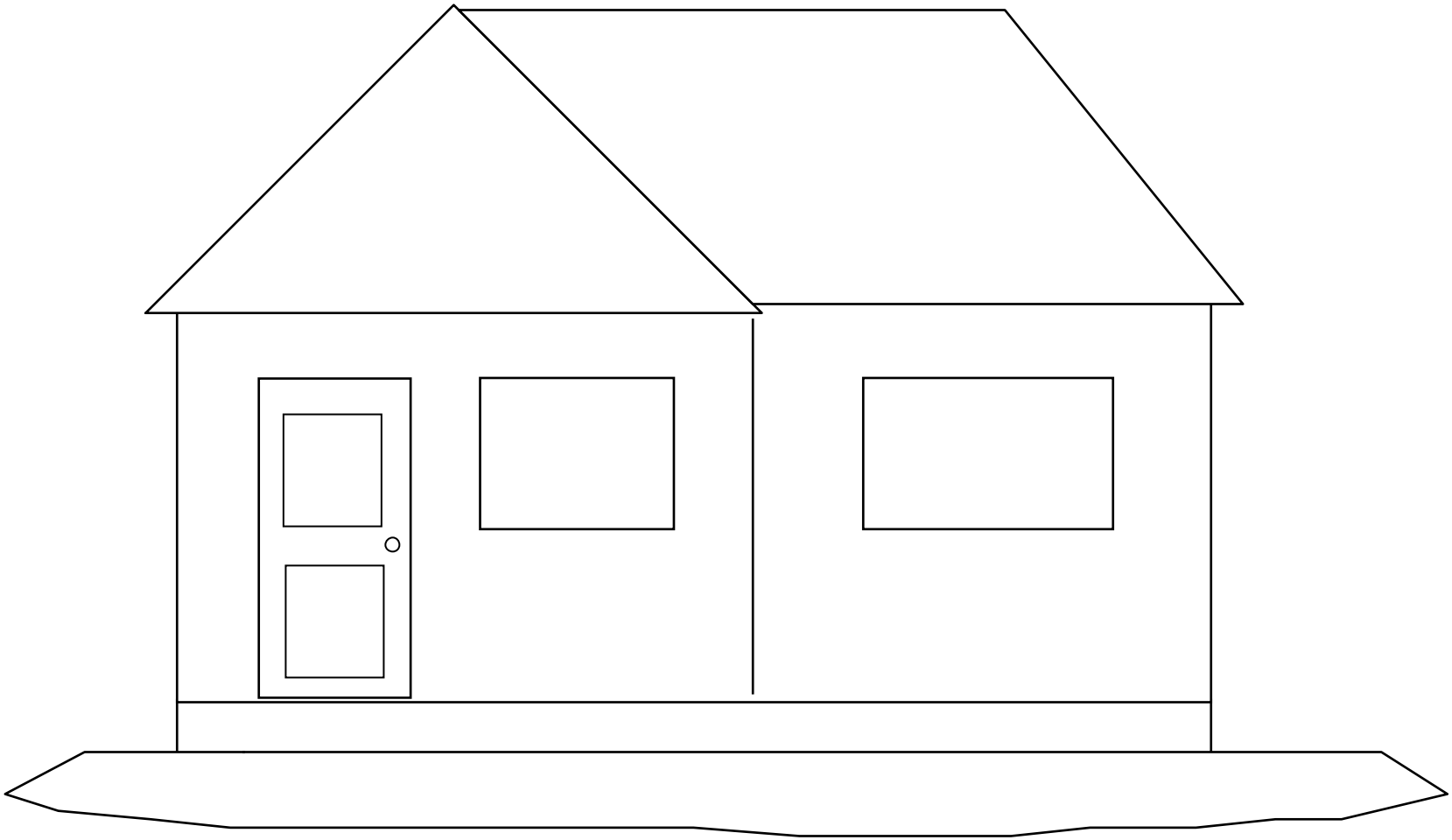
In Wisconsin Section 87.30 Stats.

- Makes a distinction between Flood and Non-Flood
- Makes a distinction between Floodway and Floodfringe

If a Flood caused the damage

- Substantially damaged/improved structures in the flood fringe must have their lowest (non-basement) floor elevated two or more feet above the BFE on fill with dryland access to the site. The basement elevation must be at or above the BFE and floodproofed to the FPE.
- Substantially damaged/improved structures in the floodway can not be rebuilt in the floodway and must be relocated or demolished.

Elevation on Fill



Criteria for Elevation on Fill

- All A Zones, with low-velocity flooding
- Usually limited to three or four feet in height unless specifically engineered by a design professional

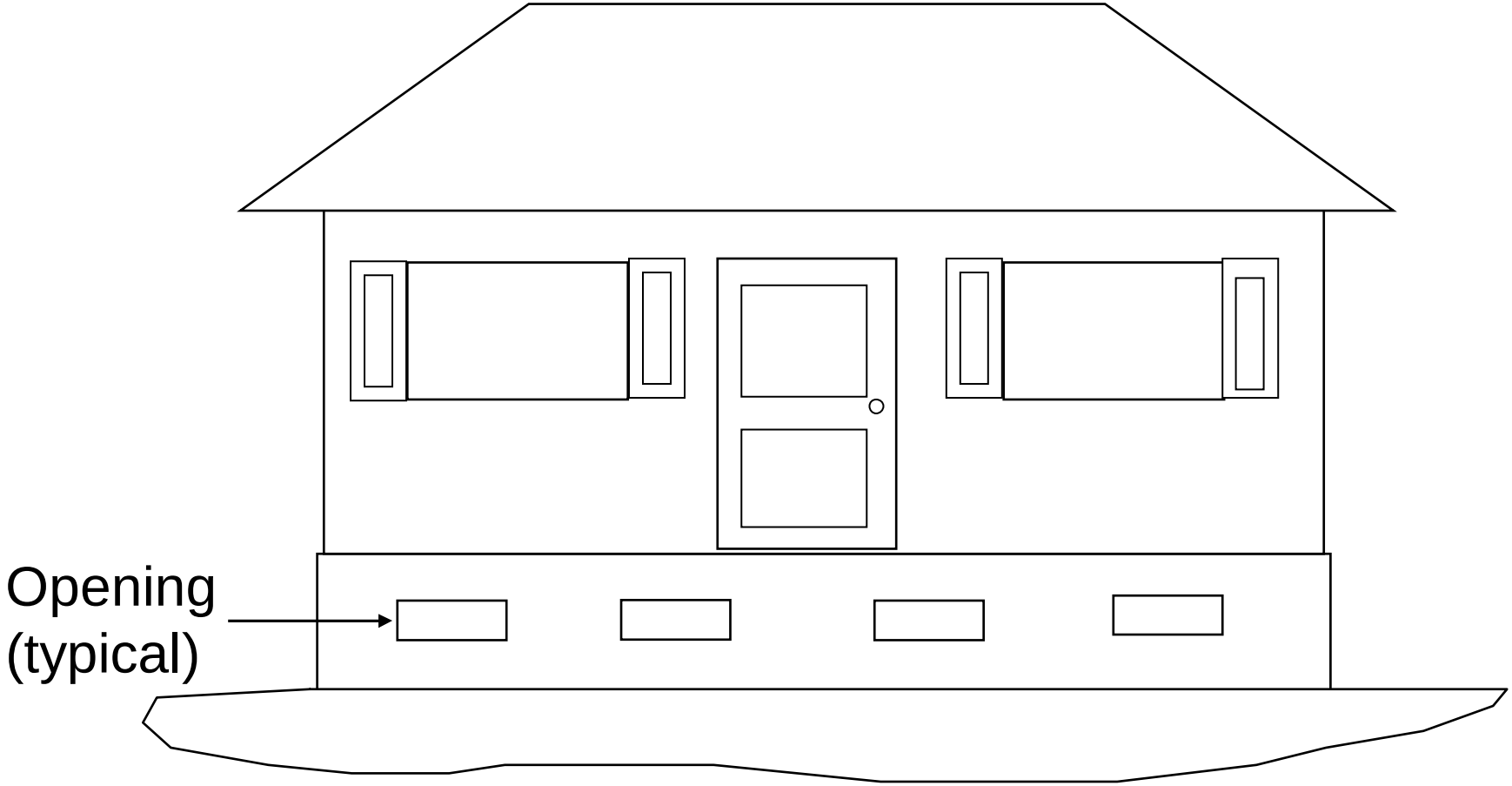
Standards for Elevation on Fill

- Fill should extend a minimum of 15 feet beyond all sides of the structure
- Erosion protection is required
- Fill should be compacted to 95% of Standard Laboratory Maximum Dry Density
- Fill should be homogeneous and isotropic

If Damage not caused by Flood

- Compliance with minimum NFIP elevation standards
- The lowest floor including basement must be at or above the BFE
- Additional elevation methods may be used on residential structures

Elevation on Perimeter Walls



Criteria for Elevation on Perimeter Wall Foundations

- All A Zones, with low-velocity flooding
- Usually limited to three or four feet in height above grade
- Enclosed areas below the lowest floor must have openings to equalize hydrostatic pressures

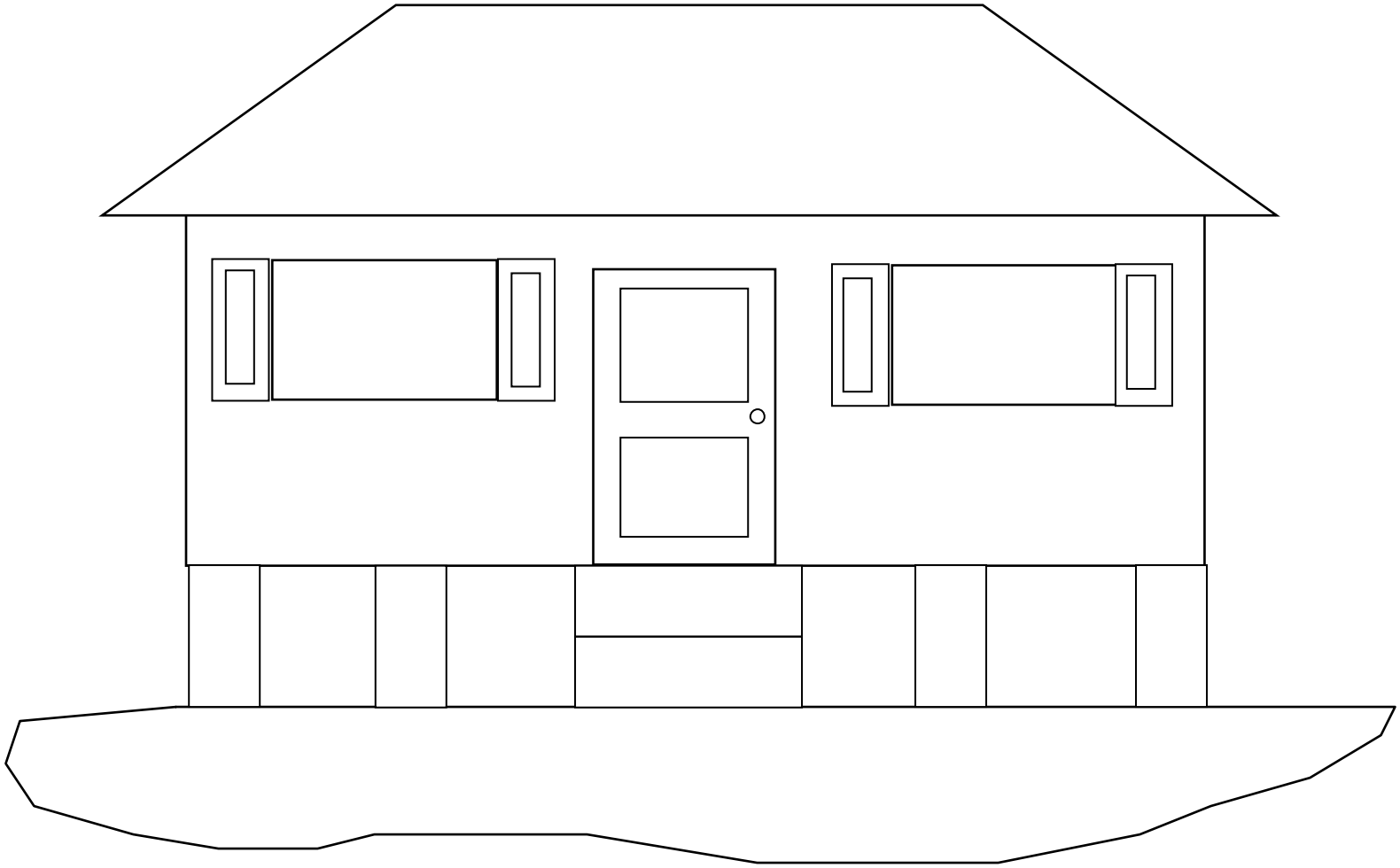
Standards for Elevation on Perimeter Wall Foundations

- Fully enclosed areas below the lowest floor shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters
- The inside grade of the crawlspace floor must match the outside grade on at least one side of the building.

Minimum Standards for Foundation Openings

- A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade.
- Openings may be equipped with screens, louvers, valves, or other “automatic” coverings

Piers, Posts or Pilings



Criteria for Piers, Posts or Pilings

- Can be used in A and V Zones
- Piers normally used in shallow low velocity flooding
- Posts and Pilings (when designed correctly) can be used in moderate flood depths and velocities
- Areas under structure to be open and used only for parking, storage and building access

Standards for Piers, Posts or Pilings

- Should take into account wind and seismic forces
- Posts and Pilings should utilize lateral bracing

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Federal Register Filing Copy
March 10, 1999

FEDERAL EMERGENCY MANAGEMENT AGENCY

NATIONAL FLOOD INSURANCE PROGRAM

ELEVATION CERTIFICATE

AND

INSTRUCTIONS

Federal Register Filing Copy
March 10, 1999

Elevation Certificate

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Standards For Utilities and Building Systems

Electrical, HVAC, plumbing and other service facilities need to be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

Relocation/Demolition

- Physically removes the structure from the SFHA
- Eliminates the need to purchase flood insurance
- Can be the most cost effective long term solution

How Do I Handle Multiple Homes that are Damaged?

Take Some Time to Get Your Tools Ready

- Community FIRM and Floodway Map
- Parcel or Street Maps
- Cameras
- Inspection Tags
- Notepad
- Tape Measures
- Personal safety equipment

Create a Form or Two……

PRELIMINARY POST FLOOD INSP CTION NOTES

Date.

Date of Construction	Address	Depth of Flooding from lowest adjacent grade (visual/measured)	Visible Signs of Damage?	Description of Damage to Structure	Duration of Flooding (Hrs, Days, Wks)	Photo Number
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			
			YES No			

ODNR Division of Water Floodplain Management Program 9/98

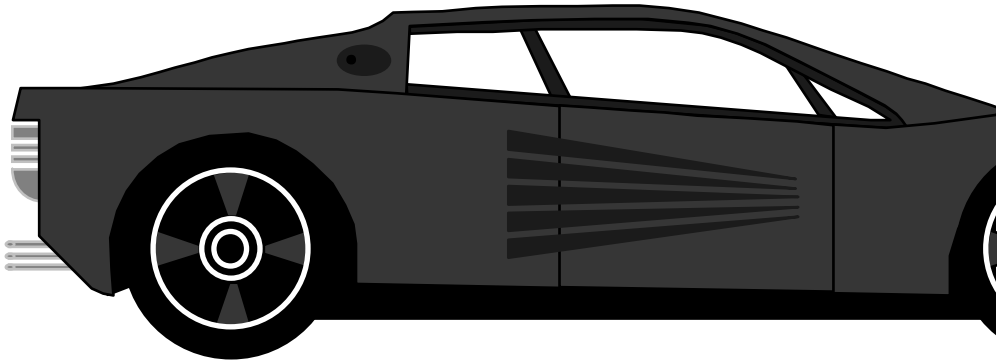
Sample

Evaluate the Work Ahead and Your Available Resources

- Take note of where the flooding has occurred
- Divide up the areas into daily portions
- Possibly cross-train other staff to help with the work
- Call other communities and pool your resources

And Then……

Get Out and Drive the SFHA as Soon as Practical!!!!



While out in the field:

- Remind affected property owners of floodplain regulations and permit procedures.
- Take photographs and document the extent of damage to structures within the SFHA.
- Gather as much information on the structure and owner as possible.
- Keep in mind the 50% threshold for substantial damage and divide the damaged structures into three distinct groups.

GROUP I Structures

Structures that have received little to no damage (40% or less)

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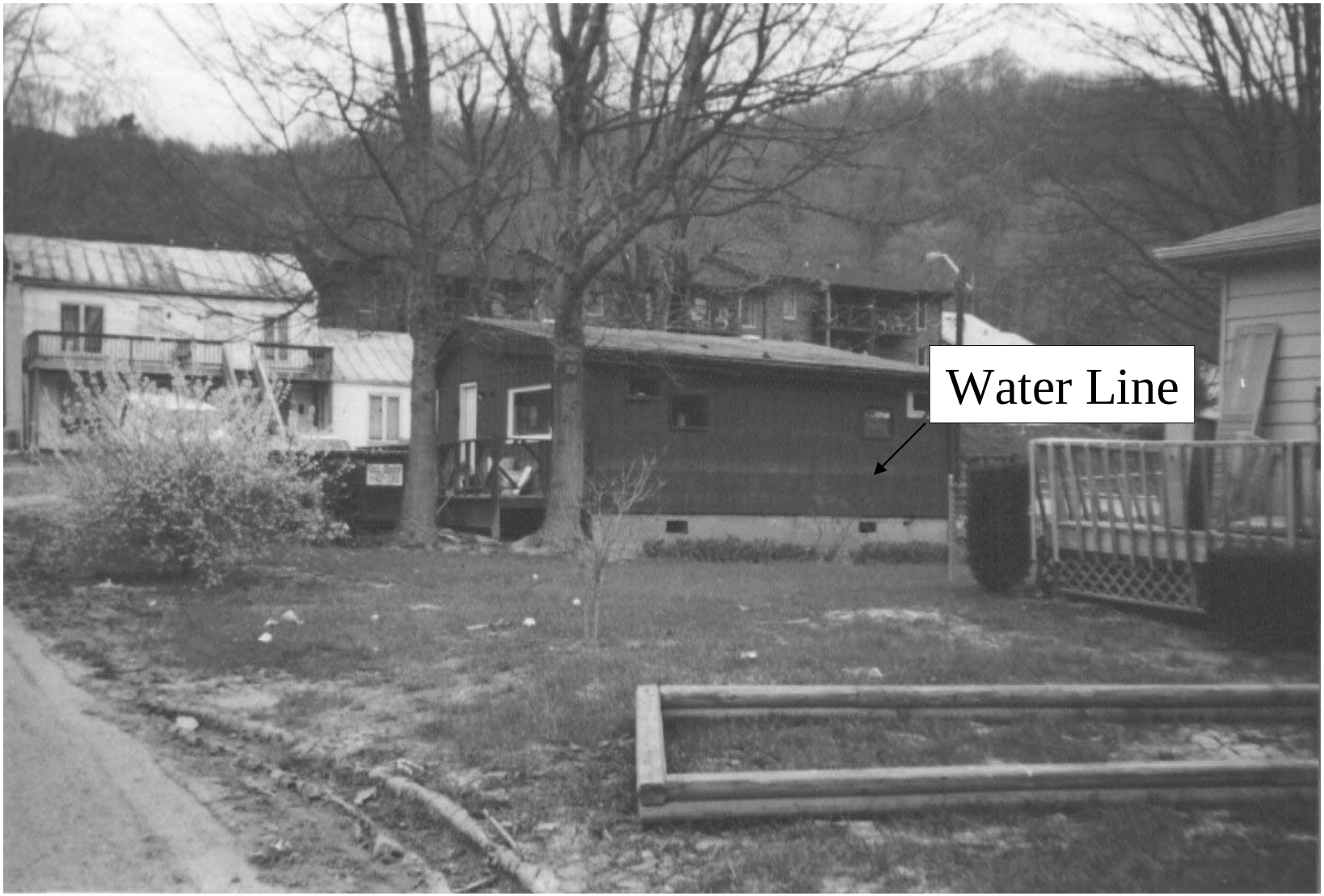
GROUP II Structures

Structures that possibly
have received substantial damage
(40% - 60%) should undergo a
detailed assessment



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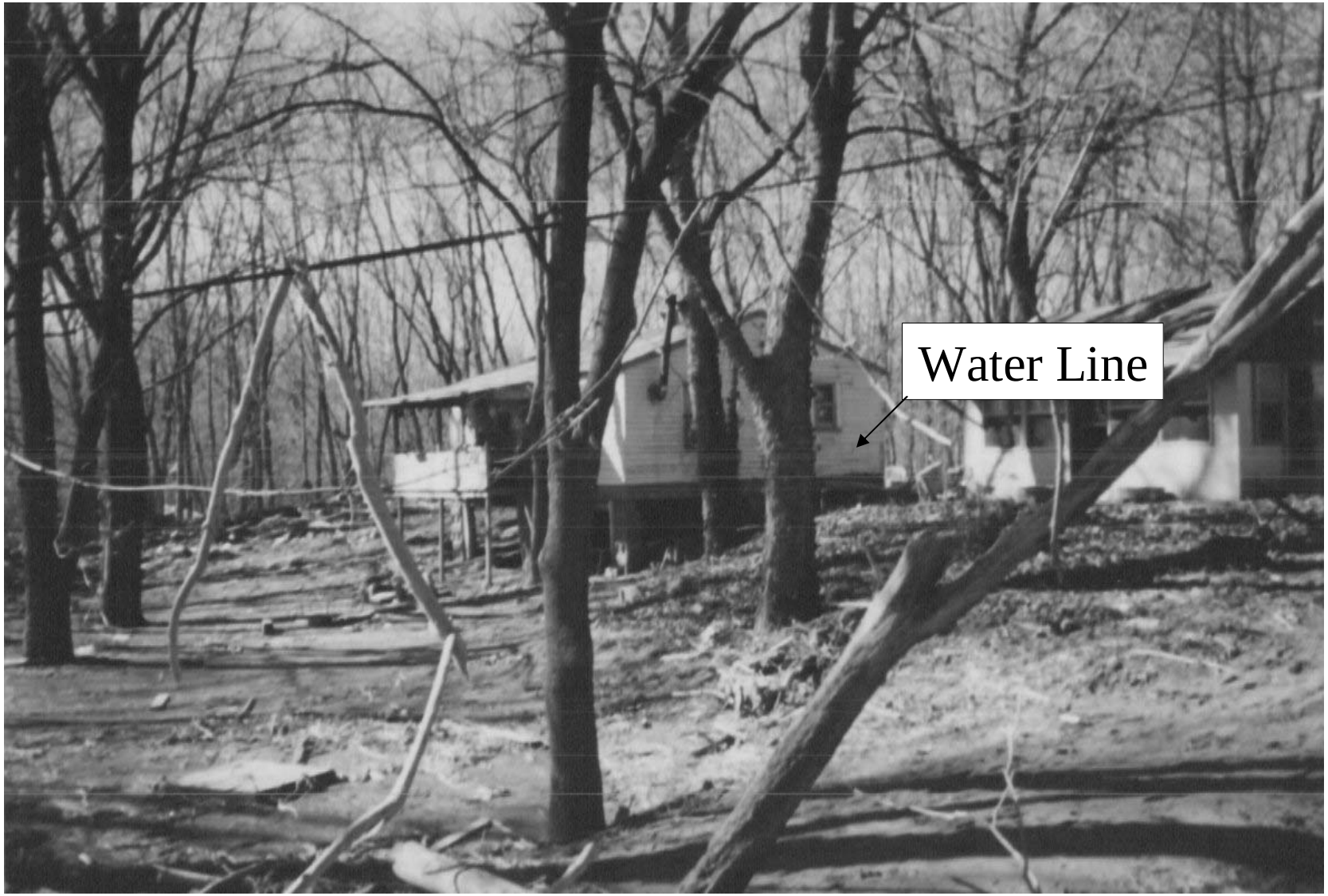

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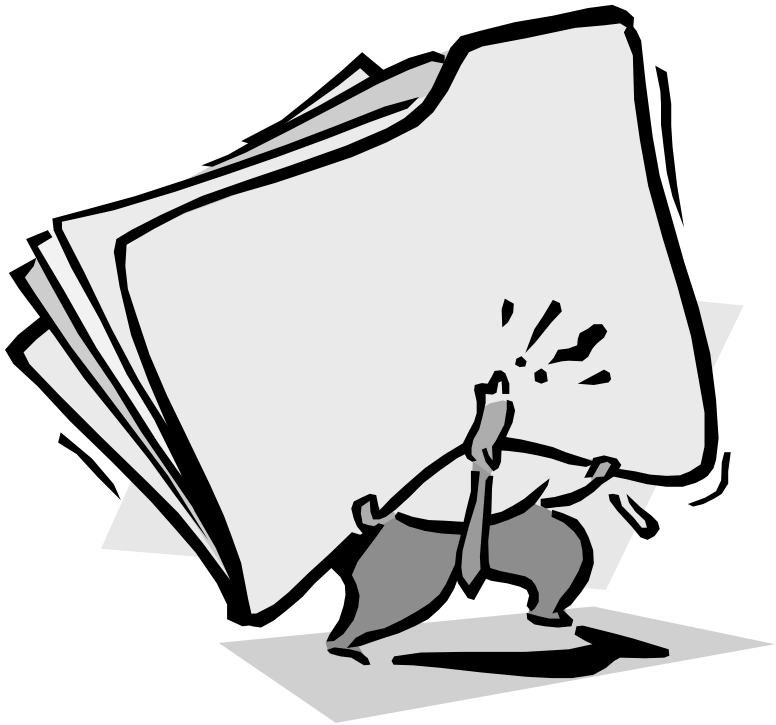
GROUP III Structures

- All structures that are obviously a total loss and can forego a more detailed assessment.
- Be sure to take pictures or video of these structures.
- Notify the owners and if possible obtain written concurrence from the owner of the substantial damage determination.

Ok Back to the Office……



For Group I Structures

- Ensure that floodplain development permits are obtained.
- Ensure that any other required DNR or Federal Agency permits are obtained.
- Ensure that you maintain documentation including the field inspection notes and/or photos to support your determination that the damage did not cross the 50% threshold.

For Group II Structures

- Ensure that floodplain development permits are obtained.
- Ensure that any other DNR or Federal Agency permits are obtained.
- Ensure that a more detailed analysis of the estimated cost of the damage is done to to determine whether the structure is substantially damaged and have the NFIP and NR116 building protection standards applied to its reconstruction.
- Ensure that you maintain documentation including the field inspection notes, photos, equalized assessed value and cost estimates used to support your damage determination.

For Group III Structures

- Ensure that the structure is not located in the floodway.
- Ensure that a floodplain development permit is obtained.
- Ensure that any other DNR or Federal Agency permits are obtained.
- Ensure that these structures are reconstructed in compliance with the building protection standards of the NFIP and NR116.
- Ensure that you maintain documentation including the field inspection notes, photos and other documentation used to support your determination.

Is there any $$$ help out there for Substantially Damaged Structures?

Increased Cost of Compliance Coverage

- Provides up to an additional $30,000 for mitigation activities to insured substantially damaged or repetitive loss structures within the SFHA.
- Requires the local community adopt repetitive loss provisions to their floodplain development regulations

Methods Eligible Under ICC:

- Elevation
- Floodproofing (non-residential only)
- Relocation
- Demolition

ICC Repetitive Loss Definition:

"Flood-related damages sustained by a structure on two separate occasions during any 10-year period for which the cost of the repairs at the time of each such flood event on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred."

Community's Role in ICC

- Community must adopt the repetitive loss definition and apply NFIP building protection standards to those structures considered to be repetitive loss.
- Community must provide documentation indicating that the structure is substantially damaged or considered to be a repetitive loss for ICC coverage to be applied.

Hazard Mitigation Grant Program

- FEMA allocates a percentage of the total disaster assistance generated in response to a Presidential declaration toward HMGP.
- Program is administered by the State (Wisconsin EM).
- Cost share with the State/Local Community.
- Voluntary and based on State Priorities (No Guarantee).
- Projects must meet benefit-cost, environmental and other Federal, State and local criteria.

Flood Mitigation Assistance

- Yearly Allocation from Insurance Policy Base.
- Requires Flood Risk Mitigation Plan.
- Administered by the State (Wisconsin EM).
- 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).

Additional Info

- www.fema.gov
- Flood Maps 1-800-358-9616
- FEMA Publications 1-800-480-2520

Thanks for coming…….

Questions??????????????