

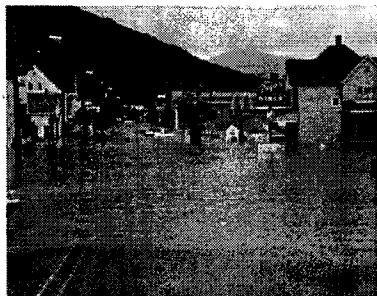


Division of Local
Government Services

Flood Plain Regulation

For Local Review Boards

A Division of the New York Department of State



Delaware River in Walton, Delaware County

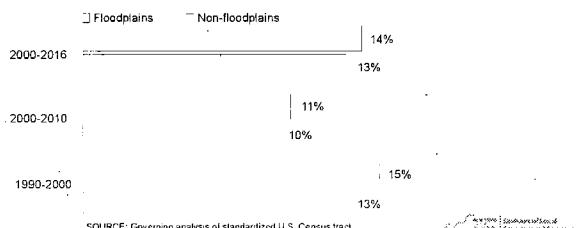
**Floods are
'acts of God'
but flood
losses are
largely acts
of man.**

- Gilbert White

Division of Local
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U.S. Flood-Prone Population Growth

Calculated population estimates show areas in FEMA-designated
100-year floodplains are experiencing slightly faster growth.



Why regulate floodplain development?

- It's in residential and building codes
- Make flood insurance available
- Reduce potential damage for new development
- Avoid adverse impacts to neighboring properties
- Promote safety for public and emergency responders

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**Floodplain
management
is your
responsibility**

"All local governments with land use jurisdiction over any area of special flood hazard shall, and are authorized to, take action necessary to achieve and maintain participation in the national flood insurance program."

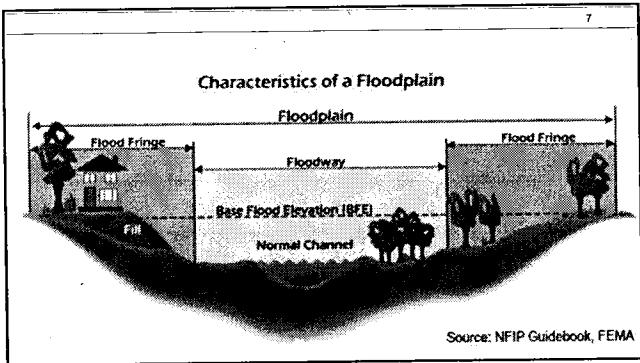
NYS Environmental Conservation Law, Article 36

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Floodway

- Also known as "Regulatory Floodway"
- "...the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot."
- Most restrictive area

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Acronyms	
BFE:	Base Flood Elevation
CRS:	Community Rating System
DFIRM:	Digital Flood Insurance Rate Map
FEMA:	Federal Emergency Management Agency
FIRM:	Flood Insurance Rate Map
FIS:	Flood Insurance Study
NFIP:	National Flood Insurance Program
SFHA:	Special Flood Hazard Area

Source: National Flood Insurance Program, FEMA

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Special Flood Hazard Area	<ul style="list-style-type: none"> • Better known as "100-year floodplain" • FEMA and building code development standards pertain only to special flood hazard area: <p>"land in the floodplain subject to a 1% or greater chance of flooding in any given year."</p>
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Source: National Flood Insurance Program, FEMA

Base flood elevation (BFE)

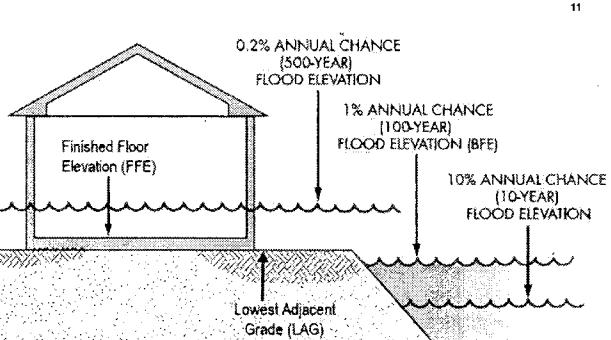
Often referred to as the "100-year" flood

Flood with 1% chance of being equaled or exceeded in any given year

- 26% chance of occurring in a 30-yr period
- 39% chance of occurring in a 50-yr period
- 63% chance of occurring in a 100-yr period

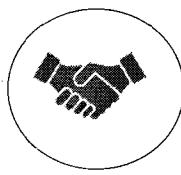
Residential buildings must be protected from flood damage to a level 2 feet above BFE; if no BFE is available, at least 3 feet above the highest adjacent grade.

Government of Canada | Ministère du Développement durable et de l'Aménagement du territoire



National Flood Insurance Program (NFIP)

- Partnership between the Federal Government and local communities.
- The Federal Government agrees to provide flood insurance if the municipality agrees to enforce sound mitigation practices.



Government of Canada | Ministère du Développement durable et de l'Aménagement du territoire

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National Flood Insurance Program

Structures in regulatory floodplain with federally backed mortgage require flood insurance

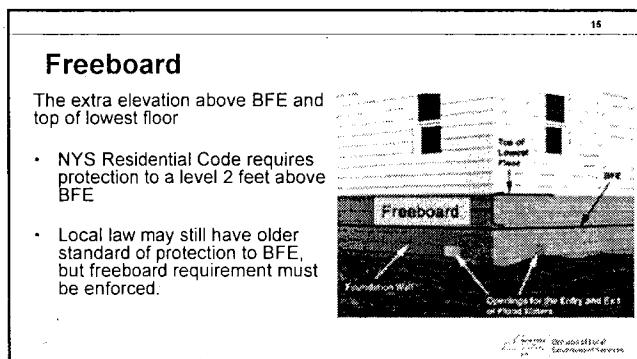
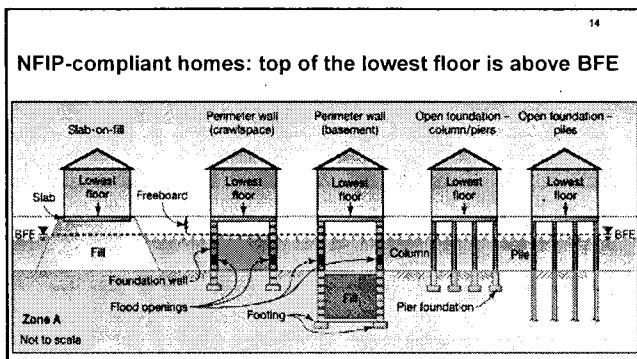
Municipalities not enforcing requirements can be kicked out!

Implications:

- flood insurance through NFIP will be unavailable;
- federally-backed mortgages will be unavailable; and
- real estate transactions will suffer



U.S. Department of Homeland Security
Flood Insurance Program



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Freeboard relevance

The diagram shows two versions of a two-story house. The left version is labeled "Without Freeboard" and has a lower ground floor. The right version is labeled "With 3' of Freeboard" and has a higher ground floor. Below each house is a circular badge indicating the annual flood insurance rate: \$5,499 for the one without freeboard and \$2,084 for the one with 3' of freeboard.

Lower flood risk = significantly lower flood insurance rates

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Limit development in flood plains!

- It's the most effective strategy to protect people and property
 - allows nature to lessen the impacts of flooding
 - provides countless other benefits to communities
- Existing development is a complicated problem; new development is relatively simple.

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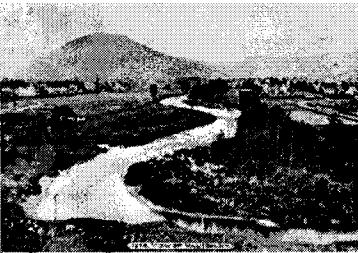
Natural floodplains work like a sponge

An aerial photograph showing a river flowing through a valley. The river meanders, creating a series of loops and backwaters. The surrounding land appears to be a mix of vegetation and possibly some developed areas, illustrating how natural floodplains function as reservoirs for floodwater.

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Benefits of Undeveloped Floodplains



- Flood damage reduction;
- Recreational opportunities;
- Plants and animals habitat;
- Water pollution reduction;
- Stormwater management;
- Erosion control; and
- Cultural resource preservation

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Model floodplain zoning law

- DEC has model language for local flood-damage protection laws, with minimum floodplain management measures required to participate in the National Flood Insurance Program (NFIP)
- NYS Uniform Fire Prevention and Building Code (Uniform Code) requires building design includes 2 feet of freeboard above base flood elevation.

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"No Adverse Impact" Principle

- Ensure that actions taken in floodplains--and throughout the watershed--don't lead to adverse impacts on property and rights of others
- Local adverse impacts should be based on physical, environmental, social, and economic conditions

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Overlay zone

Applies a common set of standards over underlying districts:

- Base layer sets permitted uses and dimensions
- Overlay sets additional requirements within specified boundaries, regardless of the underlying base zone (i.e. R1 home might also be in Floodplain Overlay)
- Could include use restrictions, landscaping requirements, and standards for environmentally sensitive areas

Benefits:

- Additional protection for defined hazard areas without negotiating on a case-by-case basis.
- Allows existing zoning to be superseded or complemented to solve a known problem.
- Implements comprehensive plan policies and strategies for future land use and environment.
- Relatively easy to maintain over time.

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VARIANCES

Variances should be rare

- Not allowed for **floodway** requirements
- All of those must be approved by NYS DOS
- Many communities issue variances when they should not, and without DOS approval
- Never grant variances for multiple lots, phases of subdivisions, or entire subdivisions.

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NYS Fire Prevention & Building Code Variance Procedures

19 NYCRR Part 1205

- When Code provision or requirement entails "practical difficulties or unnecessary hardship or would otherwise be unwarranted."
- If code provision creates excessive or unreasonable economic burden
- May not substantially adversely affect provisions for health, safety and security, and equally safe and proper alternatives may be prescribed

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FEMA floodplain variance

Applications violating local flood protection laws passed to participate in the NFIP, and Uniform Fire Prevention and Building Code require variances from both.

WARNING:
NFIP standing may be in jeopardy if you allow development in accordance with a state variance, and have not gone through local variance procedures.

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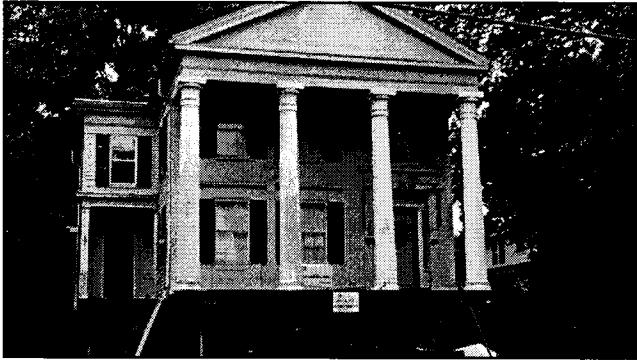
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FEMA variance examples



- Functionally dependent uses along waterways (boat docking or repair facilities)
- Building on small urban lot, if unable to elevate within confines of lot
- Temporary construction facilities during building or repair of roads, bridges and dams

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ZBA Variances for historic structures

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- Qualifying structures are listed on National Register of Historic Places, State Inventory of Historic Places, or contribute to historic district
- Changes mustn't destroy or alter characteristics that made it historic
- Certified local historic board or state historic preservation officer must first review and approve work

Florida Department of Environmental Protection
Division of Emergency Management Services

New residential buildings in floodplain

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ELEVATE (elevate top of lowest floor to or above flood protection level)

- Prohibit below grade basements on all sides
- Permit unfinished flood-resistant enclosed area solely used for parking, building access, or limited storage

ANCHOR (building, service equipment, storage tanks must prevent flotation, collapse, or lateral movement during 100-yr flood event)

- Ensure foundation won't move due to water force, erosion, or scour

Florida Department of Environmental Protection
Division of Emergency Management Services

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New non-residential buildings in floodplain

Construction protected against flood damage from 100-yr flood must:

- **Elevate** (top of lowest floor must be elevated to or above flood protection level)
- **Dry floodproof** (watertight below flood protection level, with walls substantially impermeable to passage of water)

U.S. Army Corps of Engineers
Floodplain Management Division
U.S. Environmental Protection Agency
Water Quality Division
U.S. Geological Survey
Water Resources Division

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Hazardous materials

- The NFIP does not strictly prohibit hazardous materials from areas subject to flooding.
- TIP: Require them to be protected from floodwaters to reduce or eliminate damage associated with their release.



U.S. Army Corps of Engineers
Floodplain Management Division
U.S. Environmental Protection Agency
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Water Resources Division

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NFIP subdivision standards

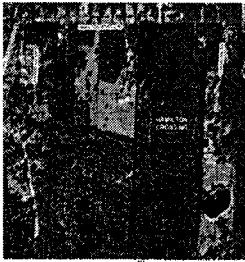
- Determine if proposals will be reasonably safe from flooding.
- If subdivision is in flood-prone area, review to assure that:
 - Proposal is consistent to minimize flood damage in flood-prone area;
 - Public utilities and facilities (sewer, gas, electrical, water systems) are located and constructed to minimize or eliminate flood damage; and
 - Adequate drainage is provided to reduce exposure to flood hazards.
- Base Flood Elevation (BFE) data requirement:
 - Require new subdivisions and other development (manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include BFE data.

U.S. Army Corps of Engineers
Floodplain Management Division
U.S. Environmental Protection Agency
Water Quality Division
U.S. Geological Survey
Water Resources Division

NYS subdivision requirement

"land shown on the plat be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood, drainage or other menace to neighboring properties or the public health, safety and welfare."

Integrate hazard mitigation by adopting local standards (i.e., don't allow development on steep slopes)



Subdivision tips

- DON'T approve lots that don't conform with floodplain regulations
- DO show floodplain boundaries/elevations on preliminary/final plats
- DO require watercourse or drainageway traversing subdivision have dedicated public easements for maintenance
- DO require public drainage installation and improvements
- DO tie soil erosion and sediment control regulations into plat approval procedure

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Site Plan Review Tips*

DO

- Preserve natural vegetative buffers
- Locate new streets outside 100 yr floodplain (or elevate them)
- Ensure adequate stormwater and drainage facilities, and their maintenance

DON'T

- Disturb sensitive resource areas
- Locate structures in 100 yr floodplain unless they comply with Flood Damage Prevention local law
- Site critical facilities in 100 and 500 yr floodplain

*Specify additional standards for shorelines, riparian buffers, or sensitive areas

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Wetlands regulations in addition to state and federal permits

Common elements:

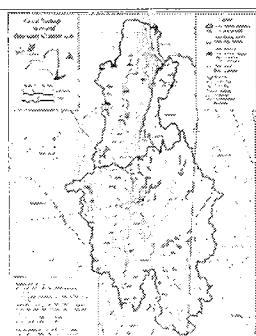
- Wetland protection goals
- Wetland definition
- Permitted/prohibited uses, or performance standards
- Penalties

Association of State
Wetland Managers'
model wetland
protection ordinance:

www.aswm.org

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MAPPING



• Wetlands Maps

Prepared by both U.S. Fish and Wildlife Service (National Wetland Inventory) and NYS DEC

• Floodplain Maps

Typically prepared by National Flood Insurance Program (administered through FEMA), so these are older versions of FIRMS

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Flood Insurance Rate Map (FIRM)

- FIRMs display Special Flood Hazard Areas (areas within boundary of a 100-year flood) within a flood plain
- FIRMs are used to balance risk of flood against rate of insurance
- <https://msc.fema.gov/portal/home>

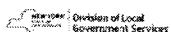
Planners use FIRMs to set land use policies and development zones.

i.e., Locate industrial zones with toxic chemicals far from floodway to protect water sources.

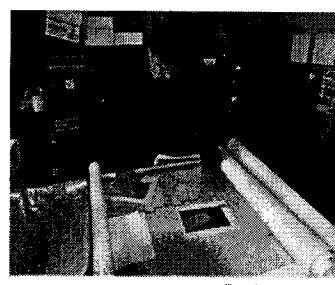
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The Local Floodplain Administrator

A Division of the New York Department of State



- Identified in local Flood Damage Prevention Law
- May also be Building Inspector, Code Enforcement Officer, or engineering department staff



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Flood Plain Administrator's Duties	
<input checked="" type="checkbox"/> Review applications	<input checked="" type="checkbox"/> Inspect development
<input checked="" type="checkbox"/> Provide base flood data	<input checked="" type="checkbox"/> Notification of watercourse alteration
<input checked="" type="checkbox"/> Review plans and specifications	<input checked="" type="checkbox"/> Record keeping
<input checked="" type="checkbox"/> Ensure all other permits are obtained	<input checked="" type="checkbox"/> Remedy violations
<input checked="" type="checkbox"/> Issue or deny permits	

Florida Department of
Natural Resources
Division of Local Government Services

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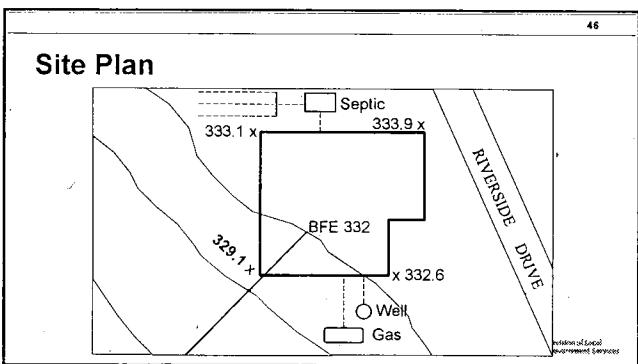
Duty: Base Flood Data	
<ul style="list-style-type: none"> Interpret floodplain boundaries (different from interpreting other kinds of maps-- it's actuarial in the sense that it shows area that would be flooded at a given risk in any year) Provide base flood elevations. 	

Florida Department of
Natural Resources
Division of Local Government Services

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Duty: Plans and Specifications	
<ul style="list-style-type: none"> Reviews plans and specifications for conformance with NFIP floodplain management criteria... Site plan Thoroughly notated plans Foundation design details 	

Florida Department of
Natural Resources
Division of Local Government Services



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Duty: Other Permits

Advises applicant of other permits or approvals needed

- State or Federal Wetlands
- Stream permits
- Local Permits

DEC and Army Corps of Engineers permits do not imply compliance with local floodplain permit requirements

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Duty: Floodplain development permit

(Not issued by FEMA)
Needed for any man-made change in the regulatory floodplain:

- grading, excavating, filling, mining;
- enclosures, storage;
- elevating a structure;
- substantial damage or improvement

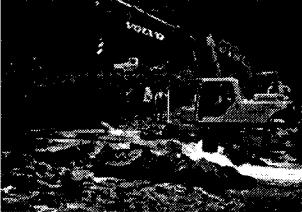
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Duty: Watercourse Alterations

Provides required notifications of changes in existing watercourses to FEMA, DEC, and adjacent communities

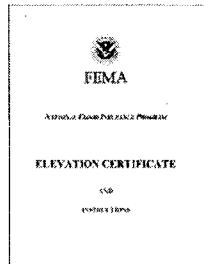
Note: Permit holder must provide for maintenance of altered portion of watercourse in perpetuity



Federal Emergency Management Agency
U.S. Department of Homeland Security

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The Elevation Certificate



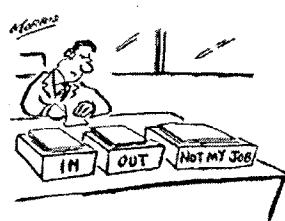
- NFIP administrative tool
- Policy rating
- Supports map revisions and amendments
- Certify building elevations
- Community compliance

www.fema.gov/elevation-certificate

Federal Emergency Management Agency
U.S. Department of Homeland Security

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What's Not on Duties List?



- Flood Zone determinations for lenders and insurance agents
- Communities are not expected to provide flood insurance related information to the public

Flood Insurance Rate Map
www.fema.gov/elevation-certificate



FIRST ALERT
FLOOD WARNING
IRONDEQUOI CREEK

Flood Warning Systems

- Flood watch: A Flood Watch is issued when conditions are favorable for flooding. It does not mean flooding will occur, but it is possible.
- Flood warning: issued when flooding is imminent or occurring.
- Urban/small stream advisories: indicates flooding which is generally only an inconvenience (not life-threatening) to those living in the affected area.

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 State of New York Division of Emergency Services

Preparedness Plans

Plans guide and coordinate responses to flood warning; identify what must be done; and by whom.

Emergency Response Actions:

- predetermined,
- documented,
- reviewed, and
- practiced in advance.



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Parcels in floodplains and wetlands

ACQUISITION

U.S. Army Corps of Engineers | Division of Local Government Services

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Advantages of acquisition

- Achieve multiple community goals
- Achieve multiple floodplain and wetland management goals
- Provide public use of acquired lands
- Provide more complete/permanent protections than other measures
- Corrects past mistakes in floodplain use

U.S. Army Corps of Engineers | Division of Local Government Services

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Disadvantages of acquisition

- Can be expensive
- Hard to obtain funding
- Often done piecemeal
- Hard to coordinate assistance
- Landowner objections
- Property tax/utility revenue loss
- Public management now required
- Takes several years

U.S. Army Corps of Engineers | Division of Local Government Services

Conclusion

- Avoid development in the floodplain; natural floodplains increase resiliency during storms.
- The goal of the NFIP was to provide insurance for properties historically in flood-prone areas, not to subsidize further development in the floodplain.
- The model floodplain law needed for the NFIP is a compromise for buildings already in the flood zone and provides a minimum standard of protection for new building in the floodplain.
- Examples that build on and go further than this law are in the Office of Planning and Development's Model Laws to Increase Resilience. Some efforts have even restored natural floodplains after a storm to increase resilience.

 Division of Local Government Services

New York Department of State Division of Local Government

518-473-3355

www.dos.ny.gov/lq/index.html

 Division of Local Government Services

The Floodplain and Its Natural Values

Floodplains are lowland areas adjacent to lakes, wetlands and rivers that are covered by water during a flood. The most visible function of a floodplain is its ability to carry and store floodwaters. In Wisconsin, the primary cause of floods is excessive rain, snowmelt or a combination of the two.

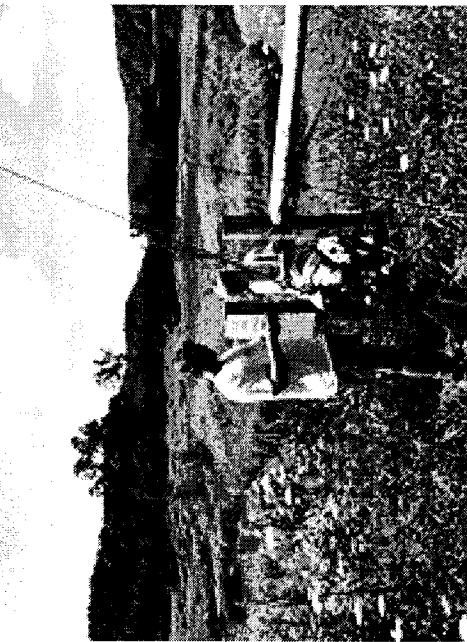
Undeveloped floodplains also provide many other natural and economic resource benefits. Floodplains often contain wetlands and other areas important to a diverse, healthy ecosystem. Such areas provide opportunities for hunting, fishing and other recreational activities. By making wise land use decisions in the development and management of floodplains, beneficial functions are protected and negative impacts to the health of the environment are reduced.

In addition to floodplain zoning, floodplain areas that are also wetlands are protected by federal, state or local wetland protection laws. These laws regulate alterations to wetlands to preserve both the amount and quality of remaining wetlands. The

wetland protection laws most common in Wisconsin are chapters NR 103 (Water Quality Standards for Wetlands); NR 115, (Shoreland Zoning) and NR 117, (Shoreland-Wetland Zoning) of the Wisconsin Administrative Code and the U. S. Army Corps of Engineers' Section 404 Permit Program. Your DNR Regional staff person can assist you in determining if wetlands are present on your property.

The values and benefits of undeveloped land located in floodplains include:

- Flood damage reduction;
- Recreational opportunities;
- Habitat for plants and animals;
- Water pollution reduction;
- Stormwater management;
- Erosion control;
- Preservation of cultural resources; and
- Outdoor education.



By understanding the regulations that affect the uses of the floodplain and its associated natural values, communities and landowners can make intelligent decisions and reduce the impacts on this important natural resource while maintaining property and aesthetic values.

Floodplain management uses many acronyms and terms. The following is a list of the most commonly used acronyms. Definitions of commonly used terms are listed later in this brochure.

Acronyms

BFE	Base Flood Elevation	FEMA	Federal Emergency Management Agency	LOMC	Letter of Map Change
BOA	Board of Appeals or Adjustment	FIRM	Flood Insurance Rate Map	LOMR	Letter of Map Revision
CRS	Community Rating System	FIS	Flood Insurance Study	LOMR-F	Letter of Map Revision Based on Fill
DFIRM	Digital Flood Insurance Rate Map	FPE	Flood Protection Elevation	NFIP	National Flood Insurance Program
DNR	Department of Natural Resources	LODR	Letter of Determination Review	RFE	Regional Flood Elevation
EAV	Equalized Assessed Value	LOMA	Letter of Map Amendment	SFHA	Special Flood Hazard Area

What Should You Know About Buying, Owning or Building a House in a Floodplain

One of the goals of floodplain management is to minimize the threat to life and property resulting from flooding by promoting the preservation of floodplains for carrying and storing floodwaters and encouraging property owners to mitigate their flood risk by elevating, relocating, or otherwise floodproofing their structures. Ideally, floodplains should be maintained as open space for uses such as natural areas, trails, ball fields, and golf courses.

Despite the risks and costs, people will continue to build in floodplains. Structures to be located in floodplains must not only be elevated above the flood protection elevation, but they must be placed so as not to diminish the ability of the floodplain to carry and store flood water. Therefore the decision to buy an existing residence or build a new residence in the floodplain must be approached with great care. This brochure will provide the reader with the knowledge to make an informed decision about living in a flood-prone area.

Floodplains are lowland areas adjacent to lakes, wetlands and rivers that are covered by water during a flood. For **floodplain management purposes**, the floodplain is the area covered by a flood that has a 1% chance of occurring in any given year, or the 100-year flood. In Wisconsin, the floodplain is officially mapped as the **floodway**, the **floodfringe** or the **general floodplain**.

The **floodway** is the river channel and areas immediately adjacent to the channel which are needed to pass the flow of the 1% chance flood. It is the area that experiences the deepest water and the highest flow velocities. Development is strictly regulated within the floodway. Most

new structures are not allowed. Fill may be allowed if it is shown after engineering analysis that it causes no obstruction to flow and no increase in flood elevations.

The **floodfringe** is the part of the floodplain outside of the floodway. The floodfringe is primarily a floodwater storage area, so fill and elevated structures can be placed in this area. However, compensatory storage may be required. Depths and velocities of floodwater in flood fringe areas are generally lower than in the floodway. Most development activities are allowed in the floodfringe as long as structures are elevated above the regulatory flood protection elevation. **Local ordinances should be checked for greater restrictions or higher standards.**

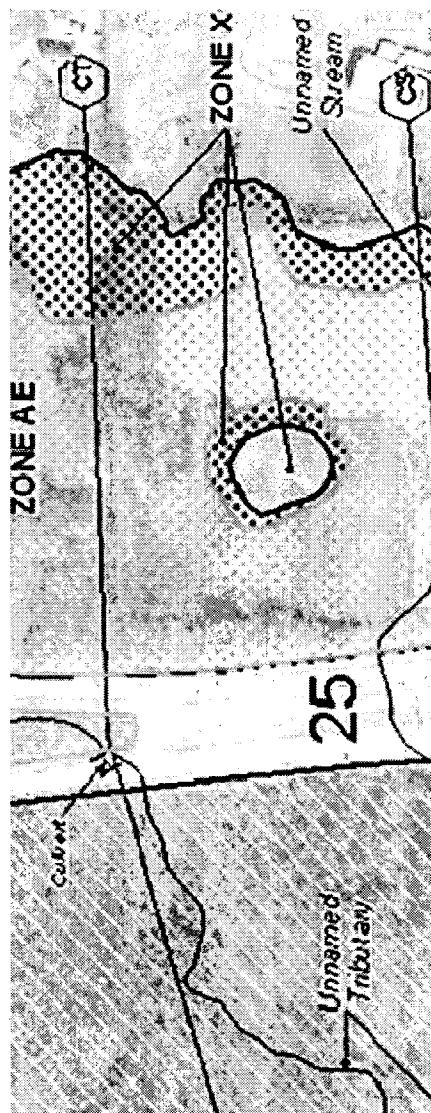
Floodway and floodfringe areas are designated only after an engineering analysis has been performed and a 100-year flood elevation has been determined. They are labeled on the flood map below as either Zones A-30 or Zone AE.

Due to the cost of these engineering analyses, some floodplain areas are mapped as **general floodplains**.

The general floodplain is also called an approximate study area, unnumbered A Zone or Zone A. Due to the lack of 100-year flood elevations and floodway/floodfringe determinations in a general floodplain area, it is **the property owner's responsibility to pay for**

an engineering analysis to determine the flood zone before the community can authorize any development.

Other zones are noted on flood maps. Descriptions of these zones can be found in the the flood map *Legend*. The 1% chance floodplain and related floodway, floodfringe and general floodplain areas are delineated on maps called Flood Insurance Rate Maps (FIRMs), Flood Hazard Boundary Maps (FHBM) and Flood Boundary and Floodway Maps (FBFM) published by the NFIP. In 1988, FEMA began publishing combined FIRM maps with all the information previously contained on the FIRM and FBFM. Copies of these maps are available through village, city and county offices. Federal, state and local government agencies, as well as lending institutions and insurance companies, use these maps to identify homes that are located in floodplain areas.



Development Standards

Wisconsin floodfringe development standards for new construction are:

- Lowest floor elevated on fill two feet or more above the RFE (basement floor can be at RFE);
- Fill must be one foot or more above RFE;
- Fill must extend 15 feet beyond the structure; and
- Structure must have dryland access.

Local ordinances may be more restrictive.

The two-foot freeboard (FPE) requirement is important to property owners for several reasons. Wisconsin has adopted the freeboard standard to protect life, health and property in dangerous floodplain areas. Because flood insurance rates are based on the elevation of a structure's lowest floor including basement, the freeboard standard also lowers a property owner's flood insurance costs dramatically. If flood elevations rise when an area is re-mapped the freeboard standard acts as a safeguard to ensure that existing structures do not become nonconforming and therefore subject to limitations on repairs and remodeling and potential lowering of market value.

Why is development in floodplains regulated?

Before 1968, floodplains were generally not regulated

and flood insurance was not available to people living in flood-prone areas. During the 1950's and 1960's, massive flooding occurred across the United States, costing billions of dollars for flood disaster relief. The U. S. Army Corps of Engineers and other federal agencies found it increasingly difficult to identify cost-effective flood control projects. Something had to be done to stop the building of structures in flood-prone areas.

In 1968, Congress passed the National Flood Insurance Act and created the National Flood Insurance Program (NFIP). Under the NFIP, flood insurance is made available to all residents of communities that agree to adopt minimum building and zoning regulations for development in flood-prone areas. The primary standard under the NFIP is that new structures (or substantial improvements to existing structures) must be elevated so that the lowest floor of the entire structure (including basement) is above the elevation of the 1% chance flood.

How can I find out if my house or property is located in a floodplain?

The best way to find out if a home or property is located in the floodplain is by visiting the local floodplain zoning administrator at the village, city or county government office where the property is located. The local official should have a copy of the floodplain map and study for the community. These maps and studies are usually the official source of information about whether a structure is located in the regulatory floodplain.

This information will show if a home or property is located in the floodplain and, more specifically, if it is located in the floodway or flood fringe. Not all communities have been designated by FEMA as flood-prone, so some do not have maps that show floodplains. Also, landowners should be aware that communities may contain substantial areas that are subject to flooding, but are not indicated as flood-prone on the official maps.



The State of Wisconsin recognized early the costs associated with flooding. In 1966, the State enacted the Water Resources Act which required communities to zone their floodprone areas to protect people and property. The floodplain management standards of the NFIP and the State of Wisconsin are very similar. The Wisconsin minimum standards can be found in Chapter NR 116 of the Wisconsin Administrative Code. The standards for the NFIP can be found at 44 CFR 60.3. The requirements of the NFIP and Wisconsin's standards are enforced at the local level through the adoption of a local floodplain ordinance. Local ordinances may be more restrictive than either the NFIP or ch. NR 116. The Wisconsin DNR and FEMA will provide enforcement and technical assistance.

What are the benefits of owning or buying a properly elevated structure in the floodfringe?

If a community has been properly administering its floodplain zoning ordinance, structures constructed in the floodfringe since the community received its initial FIRM and adopted floodplain regulations will be properly elevated to the FPE and have dryland access. Compliant structures have a lower risk of being damaged by flooding. Also, if the structure is in full compliance, normal upkeep and maintenance is allowed and repairs after damage can be made as long as all parts of the structure remain above the FPE. Improvements, such as additions, are allowed as long as they are properly elevated to the FPE.

Flood insurance may be required even for structures which have been properly elevated. However, the premium will be much lower than that charged for a structure which has not been elevated.

What are the consequences of owning or buying a non-conforming structure?

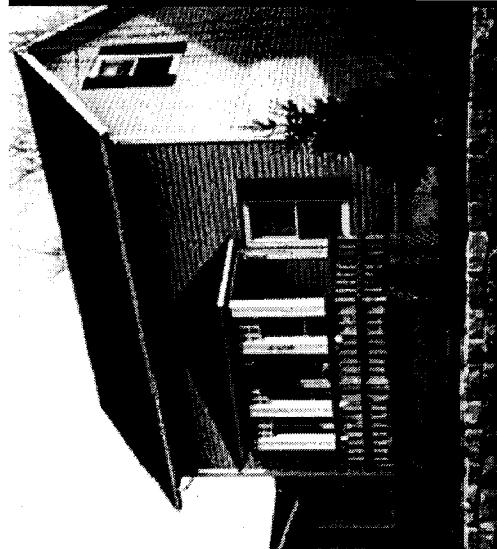
Any structure built prior to the original adoption of the floodplain zoning ordinance and which is not in compliance with current floodplain regulations is defined as a nonconforming structure. Most nonconforming structures are subject to the 50% rule, which states that if the cumulative value of structural modifications, repairs or additions equals or exceeds 50% of the structure's current equalized assessed value (EAV) the entire structure must be brought into compliance with current floodplain regulations.

Floodway

New development is prohibited in floodway areas due to the water depth and velocity during flood events. If you are considering the purchase of a lot along a watercourse check to ensure that there is a buildable area outside the floodway.

Owners or purchasers of floodway structures should be aware that structural improvements are limited because they may cause additional blockage of flood flows. Ordinary maintenance and repairs are allowed without limit. There are also restrictions on repairing damaged structures. If the cost of repair including labor **from any type of damage is less than 50% of the structure's pre-damage EAV**, then the structure **may be repaired to its pre-damage condition.**

If the damage to a floodway structure **from a flood equals or exceeds 50% of the structure's pre-damage EAV**, the structure must meet the current local ordinance standards. This means **the structure must be moved out of the floodway.**



Floodfringe

Additions and modifications to nonconforming structures in the floodfringe are allowed with certain restrictions. An addition or modification cannot raise existing flood elevations, as determined through a study by a licensed engineer. Also, the addition or modification must have a low flood damage potential. Therefore, any additions or modifications which go beyond the boundaries of the existing structure's footprint must be elevated or floodproofed to the FPE.

Limits are placed on the total cost for additions and modifications to nonconforming structures. If the cost limits are exceeded, the structure must meet all current zoning requirements. For floodfringe properties, this means the structure must be elevated to the FPE and have dryland access.



If the damage to a floodway structure is caused by a source other than flooding and the damage equals or exceeds 50% of the pre-damage EAV, the structure **may be restored to its pre-damaged condition.** However, the structure **must meet minimum NFIP standards** (lowest floor and utilities elevated to RFE and constructed using flood resistant materials). If the rebuilt structure violates the floodplain ordinance, the owner could be subject to legal action by the community and any insurance premium subsidy could be lost.

What should I know about flood insurance?

A structure located in a flood zone has a 26% chance of being damaged by a flood over a 30-year mortgage. Standard property/casualty insurance policies do not cover damage caused by flooding. Flood insurance can be purchased by any property owner or renter in a community participating in the NFIP, whether or not the property is in the floodplain. Flood insurance coverage for contents is available, however, it must be requested as a separate coverage when purchasing a flood insurance policy.

Flood insurance is a pre-requisite for federally backed loans and for most forms of disaster assistance for structures located within a mapped floodplain. Structures built prior to the first identification of the property in a floodplain on a community's FIRM are eligible for Pre-FIRM rates which are subsidized by FEMA. For structures located in the floodplain, flood insurance should be purchased for the full replacement cost of the structure.

Homeowners can purchase flood insurance coverage for up to \$250,000 in structural damage and \$100,000 for contents coverage. Businesses can purchase up to \$500,000 in building and contents coverage. Flood insurance is available for condominiums. However, separate policies must be purchased for both the common areas and the individual units. Group policies are available.

Residents of floodplain areas should remember that federal, state and local floodplain regulations are only designed to protect structures from a 1% chance flood. Floods larger than a 1% chance event can and do occur. For this reason, carrying flood insurance may be a good idea even if it is not required. Flood insurance premiums for properly elevated structures are even less costly than the subsidized premiums.

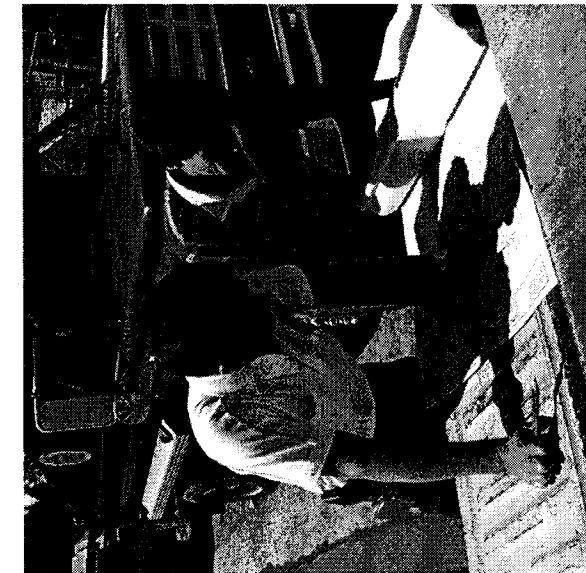
All flood insurance policies have a rider for increased

Who should I talk to?

Cost of Compliance (ICC). The ICC rider provides policy holders with up to \$30,000 to assist with the cost of bringing their substantially damaged homes or businesses into compliance with local floodplain ordinances. The rider becomes effective only if the structure has suffered flood damage equaling or exceeding 50% of its equalized assessed value.

Communities interested in reducing flood insurance costs for property owners and residents should consider joining FEMA's Community Rating System (CRS). The CRS is an incentive program which rewards the adoption of progressive flood protection practices by reducing flood insurance premiums by up to 45%.

For more information regarding joining the CRS Program, contact either Scott Cofoid, CRS/ISO Specialist at 815-220-1002 or FEMA Region V CRS Specialist at 312-408-5230. Information and applications can be found on FEMA's website www.fema.gov and typing in CRS under Search.



You should always start with the community's zoning administrator or building inspector. This person is knowledgeable about the specifics of the community's floodplain zoning ordinance. They have the maps needed to determine whether a property is located in the floodway, the flood fringe or general floodplain area. Also, communities are required to maintain copies of LOMAs, LOMRs and Elevation Certificates.

You should also contact your insurance agent. Most major insurance companies write flood insurance policies for the NFIP. Insurance agents can quote rates for flood insurance based on the location and elevation of the structure.

Lenders are another source of information. If you are borrowing money to purchase or refinance a property, the lender is responsible for determining whether or not the property is located in the floodplain for flood insurance purposes and informing the purchaser of the flood zone determination. If a structure is located in a floodplain, flood insurance is required to close the loan unless a LOMC has been issued.

The DNR Regional staff person in your area or the DNR Floodplain Management staff in Madison are also available to answer questions about owning, buying or building a home in the floodplain. Be sure to ask about other rules that may apply to the property, such as shoreland management zoning and public waters/wetland rules. Contact information for DNR offices can be found in this brochure.

Information regarding floodplain management in Wisconsin can be found at: <http://dnr.state.wi.us/org/water/wm/dsm/flood/>. Information regarding flood insurance can be found at either FEMA's main website: www.floodsmart.gov.

What are Letters of Map Change?

Letters of Map Amendment (LOMA), Letters of Map Revision (LOMR) and Letters of Map Revision Based on Fill (LOMR-F) are documents issued by FEMA that officially remove a property and/or structure from the SFHA. They are collectively called Letters of Map Change (LOMC). To obtain a LOMC, the applicant must submit mapping and survey data for the property. Some data may be obtained from local government offices (e.g., the City Hall, County Courthouse, etc.). In most cases, the applicant will need to hire a registered land surveyor to prepare an Elevation Certificate for the property. Upon receiving a complete application, FEMA normally completes its review in 4 to 6 weeks.

LOMCs may be issued for a single structure/lot or multiple structures/lots. All LOMCs remove a structure or lot from the regulatory floodplain for flood insurance purposes. A structure or lot removed from the SFHA by a LOMC is not subject to the requirements of the NFIP and may be exempt from the requirements of ch. NR 116.

A LOMA is typically a correction to a flood map and is issued based on better survey data showing that a property's natural lowest grade is above BFE. A property owner will often request a LOMA after being informed by a lending institution that the property is believed to be within a SFHA. FEMA does not charge a fee for reviewing applications for a LOMA.

A LOMR is a revision to a flood map based on technical engineering studies submitted by the applicant. LOMRs are typically issued for complex or large scale projects such as subdivisions, stream relocations and road/bridge projects. FEMA does charge a fee for reviewing a LOMR application. Under federal regulations, a property can be removed from a mapped floodplain if it is filled to

an elevation that is at or above the BFE. A LOMR-F is concurrence from FEMA that the data submitted by the applicant meets this standard and waives the flood insurance purchase requirement.

Under Wisconsin regulations, a property can only be removed from the floodplain if the building site is filled to the FPE, is contiguous to lands outside the floodplain and a land use permit for fill is obtained.

Unless a LOMR-F and a land use permit are obtained prior to the start of any construction on the property, state and federal regulations would still apply.

A property owner may also request a Letter of Detrmination Review (LODR) from FEMA if they believe the structure was incorrectly determined to be in a SFHA by a lender. A LODR is **not** a LOMC. It is FEMA's comment on the determination made by the lender or third party that the borrower's structure is in a SFHA. A request for a LODR must be submitted within 45 days of the date of the lending institution's notification that a building is in the SFHA and flood insurance is required. FEMA charges a fee for reviewing a request for a LODR.

Communities are required to maintain copies of all LOMCs issued by FEMA because they represent changes to the effective FIRM. LOMCs are usually filed with a community's floodplain zoning map and other related technical data.

Copies of LOMCs can be obtained from local building officials, zoning administrators, DNR Regional staff or FEMA. Instructions and forms for LOMCs, LODRs, Elevation Certificates and Standard Flood Hazard Determinations can be downloaded from FEMA's website at www.fema.gov and typing in *NFIP Forms* under Search.



Definitions

Flood Fringe - The floodplain area outside of the floodway that is covered by standing flood water during a regional flood.	Mobile Recreational Vehicle - A recreational vehicle that is carried, towed, or self-propelled, is licensed for highway use (if registration is required), and is always capable of being driven or towed by a licensed vehicle.
Flood Insurance Rate Map - The official map of a community showing Special Flood Hazard Areas (SFHA) and the risk premium zones (100 and 500-year elevations, floodway/fringe boundaries). Information on the map is based on historic, meteorological, hydrologic, and hydraulic data as well as open-space conditions, flood-control works, and development.	National Flood Insurance Program - A federal program that makes flood insurance available to owners of property and renters in participating communities nationwide through the cooperative efforts of the federal government and the private insurance industry. The NFIP encourages state and local governments to exercise sound floodplain management to reduce losses caused by flooding.
Flood Insurance Study - An engineering examination, evaluation and determination of the local flood hazard areas. The study is the basis for the flood maps.	Nonconforming Structure - An existing lawful structure that is not in conformity with the dimensional or structural requirements of ordinances adopted after the structure's construction.
Flood Protection Elevation - An elevation of two feet above the regional flood elevation.	Regional Flood Elevation - The water surface elevation shown on a floodplain map that has a one-percent chance of being equaled or exceeded in any given year. Shown as BFE (base flood elevation) on FIRM.
Floodproofing - Any modifications to properties and structures subject to flooding for the purpose of reducing or eliminating flood damage.	Structure - Any man-made object with form, shape, and utility either permanently or temporarily attached to or placed on ground, a river bed, a stream bed, or lakebed.
Basement - Any enclosed area of a building having its floor sub-grade (below ground level) on all sides.	Special Flood Hazard Area - The land area covered by the floodwaters of the base flood.
Accessory Structure - A detached subordinate structure that is incidental to the principal structure and is located on the same lot as the principal structure.	Substantial Damage - Damage of any origin sustained by a structure where the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the equalized assessed value of the structure before the damage occurred.
Base Flood - The flood having a one percent chance of being equaled or exceeded in any given year. Also known as the 100-year flood or in Wisconsin as the regional flood.	Board of Appeals/Adjustment - A locally appointed board authorized to hear and approve requests for variances, special exceptions or appeals of decisions made by the local zoning official.
Certificate of Compliance - A document issued by a community certifying that the construction of a building, the elevation of fill, or the lowest floor of a structure is in compliance with all ordinance provisions.	Development - Any change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.
Digitized Flood Insurance Rate Map - The FIRM in an electronic format.	Letter of Map Revision Based on Fill - An official revision by letter to an effective FEMA map, which is caused by the placement of fill on the property and which may change flood insurance risk zones, floodplain boundary delineations, planimetric features, or BFFEs.
Equalized Assessed Value - The value of a structure or parcel of property as determined by the local assessor with any adjustments made to account for an assessment that does not reflect full value.	Manufactured/Mobile Home - A building transportable in one or more sections that is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to utilities; includes "double-wides." Does not include recreational vehicles.
Federal Emergency Management Agency - The federal agency which provides emergency disaster services and which administers the National Flood Insurance Program (NFIP).	

