State of Wisconsin Flood Damage Assessment Packet

A cooperative effort by:

Wisconsin Department of Natural Resources

Wisconsin Emergency Management Agency

Federal Emergency Management Agency

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Includes Information On:

Steps to Take Following a Flood
Substantial Damage Determinations
Damage Assessment Worksheet
FEMA Substantial Damage Estimator (SDE)
Sample Building Notice
Sample Substantial Damage letter
Sample Press Release
Information on mitigation programs

STEPS TO TAKE FOLLOWING A FLOOD

Your floodplain ordinance requires permits for the repair or reconstruction of flood damaged structures that are located in the mapped floodplain. The local administrator must ensure that the repair of a damaged structure meets the floodplain permit requirements. If the cost to repair a flood damaged building is more than 50% of the equalized assessed value, the building is SUBSTANTIALLY DAMAGED (see page 2 for additional details). Repairs to the building cannot be allowed without making changes to reduce future flood damages, such as elevation of the building or even demolition. It is important to find any "substantially damaged" buildings before repairs begin.

Following a flood event, the local administrator should follow these five steps:

Step 1: Contact Wisconsin Department of Natural Resources or Federal Emergency Management Agency Both agencies have experience, materials, and guidance to help you carry out your floodplain management responsibilities. Make use of their help and expertise!

Step 2: Begin Damage Assessments and Identify Substantially Damaged Structures

- As soon as possible, take a windshield tour of the floodplain, specifically note buildings with severe damage
- Photograph and map high-water marks
- Identify areas of flood damaged structures on maps for door -to-door damage assessments.
- Begin door-to-door damage assessments in teams of two or more using the forms in this packet or FEMA's Substantial Damage Estimator 3.0 inspections forms and software. Local officials should inspect every flood damaged building in the floodplain and calculate the cost of repairs. You will also need the pre-flood equalized assessed value of every flooded structure, which can be quickly estimated from your Assessor's records.

Step 3: Post Notices on Damaged Homes and Post Public Notices about Permit Rules

Let the public know your local ordinance requirements for obtaining permits for repairs and rebuilding. A sample press release is also included with this packet. You can tag each structure with the notice included in this packet, so residents are aware of the post flood permit requirements. Often repairs begin on flooded buildings before the water even recedes from the structure. It is important to make the owners aware of permitting requirements as soon as possible. History shows that information normally spreads very fast among flood victims. Get the word out that permits are required. Post signs, flyers and notices on damaged structures in highly visible colors such as yellow, green or red, issue press releases and electronic messages, and mail letters to individual owners.

Step 4: Provide Technical Support Educate yourself on the damage assessment process, reconstruction methods, and available mitigation programs. Have your "Floodplain Development Permit Application" in hand and ready to distribute. Keep it simple. Be prepared for residents who are angry because they cannot start repairs immediately.

After a flood is the perfect time to ensure that flood damages do not occur again. Federal or state mitigation programs may be available to help. Contact the local Emergency Management Office or Wisconsin Emergency Management Agency for current information on their mitigation programs and technical guidance. Public meetings can be held in flooded communities to discuss the options available. Wisconsin Department of Natural Resources (DNR) and Wisconsin Emergency Management (WEM) can help with these meetings.

Step 5: Require Permits At this point you should be ready to issue permits and enforce your floodplain ordinance. Substantially damaged buildings should be "flagged", and letters sent to property owners declaring that the building is substantially damaged. An example letter is provided in this packet. Any permits issued for a substantially damaged building must show compliance with your regulations. The building must either be elevated, demolished, relocated or floodproofed. Please consult your ordinance for the required methods to bring the structure into compliance with your floodplain ordinance. Any buildings with less than 50% damage (these are not substantially damaged) can be issued permits to begin repairs.

Substantial Damage Determinations - "THE 50% RULE"

Communities participating in the National Flood Insurance Program (NFIP) have adopted, and are expected to enforce, a floodplain management ordinance. New buildings located in a floodplain must be elevated above the base (or 100-year) flood elevation. The same flood protection and elevation regulations also apply to substantially damaged buildings. FEMA's Substantial Improvement/Substantial Damage Desk Reference can guide you through this process.

SUBSTANTIAL DAMAGE Whenever a building located in a mapped floodplain is damaged from any source (flood, fire, wind, or manmade), the community must determine if that structure is substantially damaged. Substantial damage is when the cost of repairs are 50% or more of the structure's "pre-damaged" equalized assessed value. Manufactured homes can be substantially damaged with as little as one foot of flooding. Frame buildings typically take two feet or more of flooding.

If the building is found to be substantially damaged, the structure must be brought into compliance with the floodplain ordinance. In other words, the structure must be protected from future flooding by elevating it to above the base flood elevation (BFE) like a new structure in the floodplain.

The cost of repairs must be calculated for full repair to "pre-damaged" condition, even if the owner elects to do less. The total cost of repair includes structural, electrical, HVAC, finish materials, etc., including labor costs.

A detailed list of what should be included in the cost of repairs calculation can be found on the next page.

CUMULATIVE COST: Communities in Wisconsin have adopted ordinances which track cumulative damages and improvements. Cumulative substantial damage or substantial improvement occurs at the point where the sum of the costs for multiple repairs or improvements equal 50% or more than the original equalized assessed value of the structure.

PRESENT EQUALIZED ASSESSED VALUE: The equalized assessed value is only for the damaged building. The value of the land and exterior improvements (pool, landscaping, walkways, etc.) are excluded. If there are other accessory or detached structures that are flood damaged, separate assessment is needed for each building.

Following a disaster, most communities find it easiest and quickest to obtain the equalized assessed value from the Local Tax Assessor. Most of the city, village and county assessments are available now online. Using the municipal assessment figures ensures a unified equalized assessed value for all structures involved in the flood event (especial since taxes are based on this figures).

COST OF FLOOD DAMAGE REPAIRS: The cost of repairs must be calculated for a complete repair to the "pre-damaged" condition, even if the owner wants to do less. The total cost of the repair includes costs of all materials, labor and other items such as structural and finish materials. If local building codes require the structure to be repaired according to current codes these additional costs must be included in the full repair cost

of the structure. If an owner does not intend to repair the damaged building right away or if the owner cannot afford to make all repairs immediately, the local official should inspect the property to determine whether, based on estimates, the work required to restore it to its pre-damage condition will constitute substantial damage.

ITEMS TO BE INCLUDED IN DAMAGE DETERMINTIONS:

All structural elements including:

Foundation footings and pilings
Monolithic or other types of concrete slabs
Bearing walls, tie beams and trusses
Wood or reinforced concrete decking or roofing
Floors and ceilings
Attached decks and porches
Interior partition walls
Exterior wall finishes (e.g. brick, stucco, or siding) including painting and decorative moldings
Windows and doors
Re-shingling or retiling a roof

All interior finish elements, including:

Tiling, linoleum, stone, hardwood or carpet over subflooring.
Bathroom tiling and fixtures
Wall finishes (e.g. drywall, painting, stucco, plaster, paneling, marble, or other decorative finishes)
Kitchen, utility and bathroom cabinets
Built-in bookcases, cabinets, and furniture
Hardware

All utility and service equipment. including:

Heating, ventilating, and air conditioning equipment
Repair or reconstruction of plumbing and electrical services
Light fixtures and ceiling fans
Security systems
Built-in kitchen appliances
Central vacuum systems
Water filtration, conditioning, or recirculation systems
Electrical panel boxes

Labor and Profit: The cost of labor, calculated using market values for wage rates or contractor's estimates. Profits and any other costs associated with repairing building must be included. The value of volunteer labor or donated materials must be calculated.

ITEMS TO BE EXCLUDED FROM DAMAGE DETERMINATIONS:

Plans, specifications, survey and building permits
Demolition costs associated with clean-up, debris removal, and preparation of the site
Structural fill for elevating the building
Plug-in type appliances such as washers, dryers, stoves, refrigerators, or window air conditioners.
Detached structures such as garages, gazebos, and sheds as they will be assessed separately
Driveways, fences, sidewalks, yard lights and swimming pools

DAMAGE ASSESSMENT WORKSHEETS — Attach Photos (Recommended)

1. Address: _____ **Date of Inspection**:_____

2. Owner:_____
Telephone/Cell Number _____

3. Occupant:_____
Telephone/ Cell Number _____

4. Insurance Coverage (Optional):
Company_____ Policy Number:_____
Building: $_____ Contents: $_____

5. Special Flood Hazard Area:
Community I.D. #:_____
FIRM Panel: _____ FIRM Date:_____
Flood zone: _____ Base Flood Elevation_____(if available)
Lowest Floor Elevation: _____(if available)
Outside ground elevation: _____(if available)
Steps to Front Door: _____
Basement Depth: 8 ft 10 ft Other:_____

6. Duration of Flooding: Days_____ Hours _____

7. High Water Mark/ Flood Depth:
A) Exterior Walls _____ ft.
B) Interior Walls Basement/Crawl _____ ft. First Floor _____ ft.

8. Type of Structure:
A) Exterior:
1) Plywood/Hardboard_____ 5) Brick_____
2) Stucco_____ 6) Concrete Block_____
3) Siding/Shingles_____ 7) Other describe)_____
4) Masonry Veneer_____

B) Manufactured/Mobile Home:
1) Dimensions: a) Single wide ____ size _____ x_____
b) Double wide _____ size _____ x_____
2) Skirting: yes _____ no_____

9. Description of Structure:
A) 1 story _____ 2 story _____ Tri-level _____
1 1/2 story _____ Bi-level _____ 3 or more _____

B) Garage: Attached_____ Detached_____
Carport: Attached_____ Detached_____

Address: _____

C) Roofing:

Metal/corrugated or ribbed _____ Composition shingles _____

Other: Describe _____

D) Foundation:

Slab-on-grade _____

Crawlspace _____

Basement _____ (Finished____Unfinished____)

Poured walls _____

Block walls_____

Post-piers-piles_____

E) Heating and Cooling:

Forced air_____ Boiler _____

Wall furnace or baseboard _____ Heat Pump_____

Fireplace/wood burning stove_____ Other

F) Plumbing: Number of bathrooms: _____

G) Built-In Appliances: List: _____

10. Description of Damage:

A) Plumbing: 1) Is it exposed?_____ 2) Does it need repair?_____

B) HVAC

1) Heating -Submerged __Yes__No____ Repair _____ or Replace _____

2) AC - Submerged __Yes__No____ Repair _____ or Replace _____

2) Ducts - Submerged __Yes__No____ Repair _____ or Replace _____

C) Electrical

1) Panel Submerged __Yes__No____ Repair _____ or Replace _____

2) Outlets Submerged __Yes__No____ Repair _____ or Replace _____

D) Foundation _____

Use following descriptions listed below or describe damage:

1. Settlement/cracked 2. Partially missing 3. Sagging
4. Dislodged/destroyed 5. Submerged 6. All of the above 7. No damage

E) Exterior Walls Water depth: _____ Describe:_____

F) Interior Walls Water depth: _____ Describe:_____

G) Roof _____

11. Overall condition of structure:

A) Minor damage _____ B) Major Damage _____

C) Totally destroyed _____ D) Structure off foundation _____

Address: _____

12. Cost of Repair - The following table includes building elements typically damaged by floods for residential buildings. Enter N/A as appropriate for non-residential.

Source: _____

Item	**Estimated Cost to Repair**	**Item**	**Estimated Cost to Repair**
Foundation		**Plumbing**	
Exterior (finish, framing, wall, insulation, etc.)		**Electrical**	
Interior (walls and finish)		**Furnace**	
Doors		**Water Heater**	
Windows		**A/C Condenser**	
Cabinets and Countertops		**HVAC Ducts**	
Flooring Coverings		**Skirting/Piers (Man Homes Only)**	
Built-in Appliances		**Other**	
Hardware		**Subtotal**	
Subtotal		**TOTAL**	

13. Equalized Assessed Value

Source: _____

Equalized Assessed Value of Building: _____

14. Determination of Substantial Damage

$$\text{Percent Damage} = \frac{\text{Cost of Repair}}{\text{Present Equalized Assessed Value of Structure}} = _____\%$$

If the percent damage is equal to or greater than 50%, the building is **substantially damaged**.

_____ This building is **substantially damage**d and therefore must be elevated or floodproofed so that the lowest floor is protected at or above the elevation of the base flood and meet all other local floodplain ordinance requirements.

_____ This building is not substantially damaged. This building can be repaired without requiring mitigation.

_____ This is a properly elevated structure and may be repaired at its existing elevation.

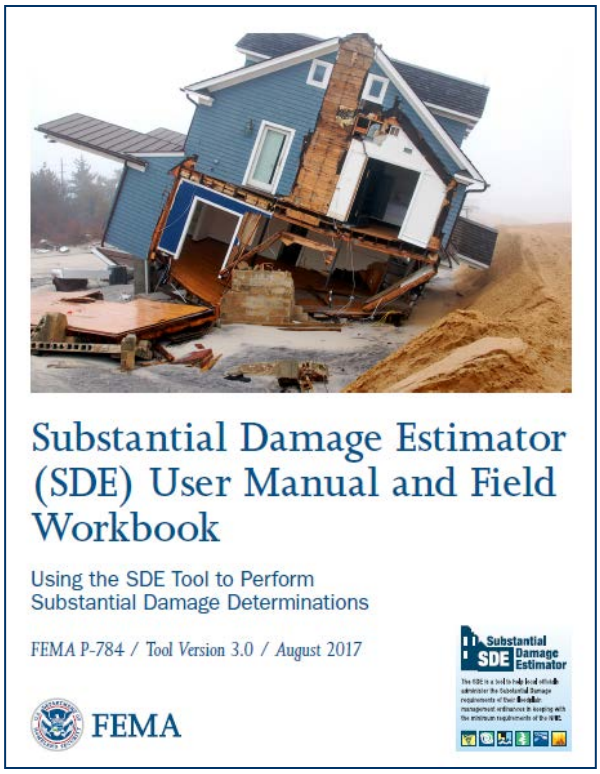
_____ The structure is elevated but modifications, such as proper flood openings are required:

Reviewed by:_____ Date:_____

Approved by:_____ Date:_____

FEMA SUBSTANTIAL DAMAGE ESTIMATOR (SDE)

FEMA has developed a computer program called the Substantial Damage Estimator (SDE) to assist local officials estimate building value and damage costs. If your community has multiple structures that have been flooded, it is definitely worth your time to obtain the SDE and learn to use the program. It will save you time, research and help keep your estimates uniform.



The program can be downloaded from FEMA's website at: https://www.fema.gov/media-library/assets/documents/18692 or contact IDNR for assistance.

You will also need to download the following:

- SDE Read Me – SDE 3.0 Tool Installation Guide.pdf
- FEMA P-784, Substantial Damage Estimator (SDE) User Manual and Field Workbook: Using the SDE Tool to Perform Substantial Damage Determinations (August 2017),
- FEMA Substantial Damage Estimator Best Practices (August 2017)

The program is based on regulatory requirements of the NFIP and is intended to be used in conjunction with an industry accepted residential cost estimating guide (such as the Marshall-Swift or RS Means Guide).

The SDE User Manual and Field Workbook is essential for helping you properly use the tool. The workbook includes both residential inspection worksheets and non- residential inspection worksheets that mirror the data entry required by the computer program.

DAMAGE ASSESSMENT SHEETS

The SDE requires the inspector to estimate the percent of damage for various building components. The information compiled below can be used with the SDE worksheet for residential buildings, quickly calculating substantial damage. It is intended to be used as a screening tool so that the property owner is notified as soon as possible as to the potential status of his property. Often a more detailed assessment is warranted, and more detailed damage percentages should be determined on an as-needed basis.

Basic Flooding Model Assumptions:

1) Medium height freshwater flooding; limited duration. No high-velocity action; no wave action.
2) A 1-story house (without a basement) is used for this example house to establish the Categories of Work percentages of total costs.

Foundation			Damage Threshold			
			0-25%	25-50%	50-75%	Over 75%
Description	Continuous perimeter foundations, footings, and piers for internal beams and floor loads. Footing depth averages between 30 inches and 42 inches below ground level. Materials include unreinforced cast-in-place concrete, unreinforced masonry or concrete masonry units (CMUs), concrete slab on grade, or raised slab construction.	Threshold Markers	Water level does not rise to the level of the bottom of the first floor of the structure.	Water level rises just above first floor level.	Water level is 4-7 feet against the outside of the building.	Water level is 7 feet or higher against the outside of the building.
			No scouring at the footings.	Limited scouring at the footings.	Limited scouring at the footings. Soils are saturated and unstable	Limited scouring at the footings. Foundation is notably cracked and/or displaced. Structure has been knocked off its foundation.
			Some undermining but no visible cracking at concrete slab.	Soils are saturated.	Cracks noted on or along the foundation walls.	Portions of the foundation are damaged or missing
				Undermining of the concrete slab, especially at corners - hairline cracks only.	Significant undermining of the concrete slab – significant cracking is visible.	Significant undermining of the concrete slab - major cracking and separation of the concrete slab.
		Common Damage	Short-term inundation to limited heights. Limited scouring and erosion - low flow and low velocity floodwaters. No noticeable cracking of the masonry or displacement of the foundation walls.	Short-term inundation - Foundation is inundated with flood waters but for a limited duration. Limited scouring or undermining of the foundation or footings is found. Minor cracking from some settlement but no displacement, heaving or discontinuities of the structural support systems.	Floodwaters extend over the top of the foundation system - significant inundation for over 12 hours. Some cracking of the masonry/concrete foundation walls. Some damage to the foundation wall from debris or settlement noted.	Settlement noted at the footings, due to erosion or unstable soils. Foundation wall damage – sections of the walls are cracking, displaced, and missing, causing an inherent instability to the support for the house. Use caution when approaching or entering the house.
	Special Considerations for Coastal/High Velocity Floods		Coastal floods may show more evidence of scouring at the supports - the foundation system may be better designed to resist this scouring action. High velocity floodwaters may create erosion/scouring that the building has not been designed to resist.			

Superstructure (Wood Frame/Masonry)			0- 25%	25-50%	50-75%	Over 75%
Description	The wall support systems that extend from the foundation wall to the roof structure. Superstructures include the exterior wall sheathing panels, shear panels, or braced wall panels. This section also includes structural members that support the roof (rafters and trusses), but does not include the roof sheathing.	Threshold Markers	Water level does not rise to the level of the bottom of the first floor of the structure.	Water level rises just above first floor level.	Water level is up to 3 feet high on the first floor level.	Water is over 3 feet high on the first floor level of the house.
				Damage to the exterior walls is limited	Some damage to exterior walls.	Significant damage to exterior walls.
	Wood frame construction: Lightweight lumber or metal studs Interior wall framing (without sheathing) Typical exterior structural panel wall sheathing is plywood or hardboard		No damage to the roof framing.	Damage to the roof framing is limited.	Significant damage to sections of the roof framing.	Significant damage to the main portion or multiple sections of the roof framing.
	Masonry construction: Load bearing walls using unreinforced masonry (URM) and reinforced block or brick Typical exterior covers are stucco, siding (aluminum, vinyl, or wood), and masonry veneer (Reinforced concrete construction should be categorized under masonry.)	Common Damage	Minor damage to portions of the wall structure. Wall studs and sheathing suffered minor damage by contact with debris or from floodwater pressures against the structure. Minor missing or damaged sections of the roof structure. No deformation or distortion of the structural frame is evident.	Some missing sections or open damage to portions of the wall structure. Wall studs and sheathing suffered some damage by contact with debris or from floodwater pressures against the structure. Some missing or damaged sections of the roof structure. No deformation or distortion of the structural frame is evident.	Missing sections or open damage to significant portions of the wall structure. Wall studs and sheathing damaged by contact, collision, or piercing with debris or from floodwater pressures against the structure. Significant missing or damaged sections of the roof structure. Some deformation or distortion of the structural frame is evident.	Missing exterior wall(s) or open damage to large portions of the wall structure. Wall studs and sheathing damaged by contact, collision, or piercing with debris or from floodwater pressures against the structure. Large missing or damaged sections of the roof structure. Significant deformation or distortion of the structural frame is evident.
	Special Considerations for Coastal/High Velocity Floods		Coastal areas have higher wind conditions requiring additional exterior wall structural panels, shear walls, and braced wall panels. Damage to these wall structural systems would indicate a higher percent of damage, because they are already designed to resist higher wind conditions.			

Roof Covering			0-25%	25-50%	50-75%	Over 75%
Description	Roofing includes a lightweight composition shingle, tile roofs, metal roofs, or a built-up roof with gravel or rock cover material. Roofing does not include structural framing members such as rafters or prefabricated trusses that support the roof deck. The roof sheathing and flashing is included in this section.	Threshold Markers	Minor wind damage to the roof coverings.	Some damaged areas of the roof from high-winds or damage from debris.	Significant damaged areas of the roof from high winds or damage from debris.	Large damaged areas of the roof from high winds or damage from debris.
			Main surface areas are unaffected.	Some sections of the roof covering are missing or loose.	Significant sections of the roof covering are missing or loose.	Major sections of the roof covering are missing or loose.
			Flashings are intact.	Some damage to the flashings.	Damage to the flashings allows some water infiltration at joints and roof penetrations.	Damage to the flashings allows significant water infiltration at joints and roof penetrations.
			No damage to the roof sheathing.	Minimal damage to the roof sheathing.	Significant damage to the roof sheathing - some areas of the sheathing will need replacement.	Major damage to the roof sheathing - most of the roof sheathing will need replacement.
		Common Damage	Roof shingles or tiles mostly intact. Some minor damage to roof shingles - some torn or loose shingles in limited areas.	Some areas where the roof shingles were damaged by high winds. Several small areas of exposed roof sheathing as a result of missing/damaged shingles.	Some areas where the roof shingles were damaged by high winds. Several small areas of exposed roof sheathing as a result of missing/damaged shingles. Some damage to the roof covering and sheathing due to debris falling or penetrating the roof assembly.	Major areas of the roof where the shingles/tile are missing, allowing rainwater to freely enter the house below. Significant damage to roof covering and roof sheathing from strong winds or windborne debris penetrating the roof assembly.
	Special Considerations for Coastal/High Velocity Floods		Coastal areas have higher wind conditions requiring additional roof covering requirements. Damage to these roof coverings would indicate a higher percent of damage, because they are designed to resist higher wind conditions. Damage to the roofing is more likely during high-wind conditions due to the loss of protection from missing roof coverings and water infiltration. This will increase the percent of damage.			

Exterior Finish		0- 25%	25-50%	50-75%	Over 75%
Description: The wall covering system that covers the wall sheathing, as well as insulation and weather stripping. This includes the water resistant materials and the finish materials: Stucco, Siding (aluminum, vinyl, or wood), Masonry, Stone veneer. Insulation is installed at the flooring beneath the lowest floor level and throughout the walls and ceilings. Types of insulation include: fiberglass wall and ceiling insulation, blown wall and ceiling insulation, and rigid wall insulation.	Threshold Markers	Water level is less than 6 inches above the lowest floor level. The duration of the floodwaters is limited - less than 12 hours.	Water level is between 6 and 18 inches above the lowest floor level. The duration of the floodwaters is limited - less than 12 hours.	Water level is between 18 inches and 3 feet above the lowest floor level. The duration of the floodwaters is more than 12 hours.	Water level is more than 3 feet above the lowest floor level. The duration of the floodwaters is more than 12 hours.
	Common Damage	Water staining, contamination, and damage on some of the exterior wall finishes. 'Clean and repair' process is likely. Brick and stone veneer walls, stucco walls, and 'cultured stone' walls may need some water removal techniques to allow drying of the interior materials and wall cavities. Verify adherence of the finish materials to the wall substrate. A limited amount of the siding materials may require replacement as needed. No damage or replacement of the insulation system is necessary, except where water and high moisture conditions have caused the insulation to fall loose within the crawlspace sub-flooring.	Damage/losses to some areas of the exterior wall surfaces, in addition to water staining and contamination. Some repairs are required at damaged locations prior or during 'clean and repair' process. Brick and stone veneer walls, stucco walls, and 'cultured stone' walls may need some water removal techniques to allow drying of the interior materials and wall cavities. Verify adherence of the finish materials to the wall substrate. Damaged house trim work will require replacement. Water damage to the insulation in the sub-flooring above the crawlspace or basement levels. Damage to insulation is evident and insulation often has fallen loose. This insulation should be removed and replaced.	Damage/losses to significant sections of the exterior wall surfaces, in addition to water staining and contamination. Significant repairs are required at damaged locations prior to 'clean and repair' process. Replacement of some sections of the exterior siding is required. Brick and stone veneer walls, stucco walls, and 'cultured stone' walls may need some water removal techniques to allow drying of the interior materials and wall cavities. Verify adherence of the finish materials to the wall substrate. Water damage to the insulation in the sub-flooring above the crawlspace or basement levels. This insulation should be removed and replaced. Water saturation of wall insulation may be found in the lowest section of the exterior walls. Contaminants in the flood waters are cause for removal and replacement of lower sections of the saturated insulation. Clean, sanitize, and dry the structural systems before re-installing materials. Damaged house trim work will require replacement, especially at door and window casings.	Damage/losses to major sections of the exterior wall surfaces, in addition to water staining and contamination. Major repairs are required at damaged locations prior to 'clean and repair' process. Replacement of large sections of the exterior siding is required. Brick and stone veneer walls, stucco walls, and 'cultured stone' walls may need some water removal techniques to allow drying of the interior materials and wall cavities. Verify adherence of the finish materials to the wall materials. Damaged house trim will require replacement, especially at door and window casings. Water damage to the insulation in the sub-flooring above the crawlspace or basement levels. This insulation should be removed and replaced. Water saturation of wall insulation requires the removal of all of the insulation from the damaged sections of the exterior walls. Contaminants in the flood waters are cause for removal and replacement of lower sections of the saturated insulation. Clean, sanitize, and dry the structural systems before re-installing.
Special Considerations for Coastal/High Velocity Floods		The salt, erosion, and winds in coastal areas will have a damaging effect on the quality of exterior wall finishes. Damage to exterior finishes are more likely during high-wind conditions due to the loss of protection from missing exterior finishes and water infiltration. Damage to the insulation is more likely during high-wind conditions due to the loss of protection from missing roof coverings and exterior finishes, and from subsequent water infiltration. This will increase the percent of damage.			

Interior Finish		0-25%	25-50%	50-75%	Over 75%
Description	Threshold Markers	**Water level does not rise to the level of the first floor structure.** **The duration of the floodwaters is limited - less than 12 hours.**	**Water level rises just above the first floor level.** **The duration of the floodwaters is limited - less than 12 hours.**	**Water level is up to 3 feet above the first floor level.** **The duration of the floodwaters is more than 12 hours.**	**Water is more than 3 feet above the first floor level of the house.** **The duration of the floodwaters is more than 12 hours.**
Interior finish includes the gypsum board, drywall, plaster, or paneling that makes up the wall surfaces. It also includes trim around door baseboards, casings, chair rails, and ceiling moldings. **Materials include low-grade wood/plastic composites, soft woods, and hard woods. Finishes include paint, stain, or varnish.** **This item also covers any exterior and interior painted surfaces. This includes all interior painted surfaces, but not the building or repairs of the underlying surfaces. This also includes those exterior siding materials (and trim work) that need to be painted, but not those that have inherent coloring within the materials themselves (brick, stucco, EIFS).**	Common Damage	Wicking of the water and high moisture conditions into the finished materials at the subflooring and at the bottom of the walls. Water staining and damage possible at baseboard and the casings at the bottoms of door openings. Some adjustment/repair/ replacement may be necessary. No damage anticipated on door, cabinet, and window hardware. The baseboards and the bottom of the door casings may need to be cleaned and painted.	Water staining and damage likely at the baseboard and the casings at the bottoms of door openings. Some adjustment/repair/replaceme nt may be necessary. Water damage at the lowest levels of the wall assembly - lower wall and trim may need to be removed and replaced. Minor damage anticipated on door, cabinet, and window hardware. After repairs to surfaces, the lower wall finishes, baseboards, and door casings will need to be primed and repainted. The bottoms of the cabinet bases in the kitchen and bathrooms may require repainting.	Water staining and damage at the baseboards and the casings at door openings need to be replaced. Water damage at the lowest levels of the wall assembly - wall and trim, window sills and window aprons, wall paneling, wainscoting and chair rails require removal and replacement. Wall surfaces should be removed to a height of 4 feet. Some damage anticipated on door, cabinet, and window hardware. Some replacement needed. After repairs to surfaces, the entire wall finishes, baseboards, and door and window casings will need to be primed and repainted, along with the vanity cabinets in the bathrooms.	Water staining and damage at the baseboards, and running trim and casings at door and window openings need to be replaced. Water damage at all the levels of the wall assembly - wall and trim, window sills and window aprons, wall paneling, wainscoting, and chair rails require removal and replacement. Wall surfaces should be removed to a height of 8 feet. Significant damage anticipated on door, cabinet, and window hardware. Some replacement needed. After repairs to surfaces, the entire wall finishes, baseboards, door and window casings, and window sashes will need to be primed and repainted along with the vanity cabinets in the bathrooms. Repaint both the upper and lower kitchen cabinets, where these are paint-grade cabinets.
Special Considerations for Coastal/High Velocity Floods		**Damage to the interior finishes are more likely during high-wind conditions due to the loss of protection from missing roof coverings and exterior finishes, and from subsequent water infiltration. The salt, erosion, and winds in coastal areas will have a damaging effect on the quality of exterior hardware. This will significantly increase the percent of damage.**			

Doors and Windows		0-25%	25-50%	50-75%	Over 75%
Description	This section includes all doors and windows of a structure, as well as locks, hinges, frames, and handles. Assumptions are hollow core doors with low-cost hardware for low, fair, and average quality construction, raised-panel hardwood veneer with good quality hardware for good or excellent quality construction. (This section does not include paint or stain.)				
Threshold Markers		**Water level rises just to the floor structure of the first floor level.** **The duration of the floodwaters is limited - less than 12 hours.**	**Water level is just above the first floor.** **The duration of the floodwaters is limited - less than 12 hours.**	**Water rises to at least 12 inches above the first floor level.** **The duration of the floodwaters is more than 12 hours.**	**Water rises more than 12 inches above the first floor level.** **The duration of the floodwaters is more than 12 hours.**
Common Damage		Bottoms of some interior doors may be deformed, delaminated, or have some swelling damage. Doors may need adjustment and/or repairs to close and latch properly. No impact on normal sill-height windows. Damage may be found at floor-level windows (hopper windows, awning windows, and floor-to-ceiling windows).	Bottoms of interior and exterior doors may be deformed, delaminated or have some swelling damage. Doors may need adjustment and/or repairs to close and latch properly. No impact on normal sill-height windows. Damage may be found at floor-level windows (hopper windows, awning windows and floor-to-ceiling windows).	Bottoms of interior and exterior doors will be deformed, delaminated, or have some swelling damage. Interior doors will likely need replacement. Exterior doors may need adjustment, repairs, or replacement. No impact on normal sill-height windows. Repairs or replacements may be needed at floor-level windows (hopper windows, awning windows, and floor-to-ceiling windows).	Bottoms of interior and exterior doors will be deformed, delaminated, or have some swelling damage. Interior and exterior doors will likely need replacement. Deformation or other damage will be found at normal sill-height windows. Replacement will be necessary at floor-level windows (hopper windows, awning windows, and floor-to-ceiling windows). Replacement may be necessary for other windows.
	Special Considerations for Coastal/High Velocity Floods	**Wind-driven rain in coastal areas will have a damaging effect on the quality of exterior doors and windows.**			

Cabinets and Countertops		0-25%	25-50%	50-75%	Over 75%
Description	**The basic cabinets for bathroom vanities and kitchens include paint-grade cabinets made of a fiberboard or plywood material. The countertop is laminated plastic or a manmade 'cultured stone' surface.** **Paint-grade cabinets are the baseline because they can be painted to match upper wall cabinets, when they are repairable, to return the house to pre-disaster conditions.** **Damaged cabinets with hardwood face-frames, doors, and drawers will require replacement based on the depth of flooding above the floor. Therefore, if the flood depth only damages the base cabinet and countertops, the percent damage will be 60% or less.**				
Threshold Markers		**Water level is less than 4 inches above the finished floor level.**	**Water level is between 4 and 12 inches above the finished floor level.** **Flood duration is short - no prolonged exposure to water or contaminants.**	**Water level is between 1 foot and 3 feet above the finished floor level.** **Flood duration is longer than 12 hours - prolonged exposure to water and contaminants.**	**Water level is more than 3 feet above finished floor level.** **Flood duration is longer than 12 hours - prolonged exposure to water and contaminants.**
Common Damage		Base cabinets have minimal water damage. Swelling and deterioration of manufactured case goods, especially cabinet bases, sides, and drawers using engineered wood products. Bathroom vanity cabinets and kitchen base cabinets may need cleaning, sanitizing, and limited repairs. Repainting will be required to match upper cabinets in kitchen.	Base cabinets of particleboard or medium-density fiberboard need to be replaced. Repaint to match upper cabinets in kitchen. Wood and plywood base cabinets may need cleaning, sanitizing, and some repairs at cabinet base. Repainting will be required to match upper cabinets in kitchen.	Replace base cabinets. Water damage and exposure is prolonged - deformation, delamination, and warping of cabinet base drawers and doors. Water contains debris and contaminants. The countertops may need to be replaced.	Replace base cabinets and upper wall cabinets. Water damage and exposure is prolonged - deformation, delamination, and warping of cabinet base drawers and doors. Water contains debris and contaminants. The countertops will need to be replaced.

Floor Finish		0-25%	25-50%	50-75%	Over 75%
Description	Threshold Markers	**Water level does not rise to the level of the bottom of the first floor structure.**	**Water level rises just to the first floor level.**	**Water level is above the first floor.**	**Water level is well above the first floor.**
			Water level inundates the sub-flooring but does not rise to the finished floor materials.	**Water level inundates above the sub-flooring and finished floor materials.**	**Water level inundates above the sub-flooring and finished floor materials.**
		No damage to the floor sheathing.	**Minimal damage to the floor sheathing.**	**Significant damage to the floor sheathing - some areas of the sheathing will need replacement.**	**Major damage to the floor sheathing - most of the floor sheathing will need replacement.**
	Common Damage	No damage is anticipated in the floor finish system at this water level.	The sub-flooring may be damaged or delaminated by high-humidity conditions, and may need to be repaired or replaced.	The sub-flooring may be damaged or delaminated by water inundation. Floor covering will need removal, drying, sanitizing, and replacement, depending upon the type of floor covering. Carpets (with padding) should be removed and replaced. Wood floors will need to be replaced. Ceramic tiles and stone flooring may be re-used if they are still secured to the substrate. Sheet vinyl and vinyl tiles will need to be replaced to facilitate drying and repair of damage of the subfloor.	The sub-flooring may be damaged or delaminated by water inundation. Floor covering may need removal, drying, sanitizing, and replacement, depending upon the type of floor covering. Carpets (with padding) should be removed and replaced. Wood floors will need to be replaced. Ceramic tiles and stone flooring may be re-used if they are still secured to the substrate. Sheet vinyl and vinyl tiles will need to be replaced to facilitate drying and repair of damage of the sub-floor.
	Materials for floor finish include: carpet, hardwood, vinyl composition tile, sheet vinyl floor cover, ceramic tile, and marble. Sub-flooring is also included. **Carpeting, hardwood flooring, vinyl flooring tiles, and sheet vinyl are typically replaced after water inundation. Brick, stone, and clay tile floor can be cleaned, sanitized, and reused. These types of floors may have areas where the mortar setting compound has broken loose. These tiles should be replaced. The floor sheathing is included in this Category of Work, as compared to the Superstructure Category.**				
	Special Considerations for Coastal/High Velocity Floods	**Damage to the floor finishes and floor sheathing are more likely during high-wind conditions due to the loss of protection from missing roof coverings and exterior finishes, and from subsequent water infiltration. This will significantly increase the percent of damage.**			

Plumbing		0-25%	25-50%	50-75%	Over 75%
Description	The plumbing system includes the incoming water service (municipal water supply or well service), the water heater, water distribution piping, and the wastewater system. Wastewater will be conveyed away from the structure by either a connection to the municipal sewer system or a septic system. When floodwaters saturate the soils, septic systems may be unable to discharge their waste, causing a back-up of the septic systems. If floodwaters raise above the level of the municipal sewer manhole covers, the sewage can back-up into the house through the sewer lines. Verify the condition of the potable water supply to determine if it can provide a safe water supply.				
	Threshold Markers	Water level is less than 6 inches above the lowest floor level.	Water level is between 6 inches and 18 inches above the lowest floor level. Flood duration is short - no prolonged exposure to water or contaminants.	Water level is between 18 inches and 3 feet above the lowest floor level. Flood duration is longer than 12 hours - prolonged exposure to water and contaminants.	Water level is more than 3 feet above the lowest floor level. Flood duration is longer than 12 hours - prolonged exposure to water and contaminants.
	Common Damage	Floor drains can backflow into the house. Under floor (or under slab) plumbing systems should be purged, cleaned, and sanitized. Any materials that might contain remnants of waste materials or other contaminants in the floodwaters will require replacement.	Floor drains, shower drains, bathtubs, and toilets can back flow into the house. Septic contamination is likely. The water heater may need to be replaced.	Floor drains, shower drains, bathtubs, toilets, bathroom sinks, utility sinks, and toilets will backflow into the house. Septic contamination will occur. The water heater will need to be replaced.	All plumbing fixtures will backflow into the house. Septic contamination will occur. The water heater will need to be replaced.
	Special Considerations for Coastal/High Velocity Floods	Houses in coastal areas may have additional plumbing fixtures and piping on the exterior of the house.			

Electrical		0-25%	25-50%	50-75%	Over 75%
Description	100- to 200-amp electrical service providing circuit breaker panels and distribution wiring. B. Basic wiring (15/20 amp) for outlets, switches, receptacles, and lighting; 25- to 60-amp wiring systems for outlets for a washer, dryer, stove, and refrigerator. (A minimum number of outlets and lighting fixtures, sometimes quantified by local building code, begin to increase in number and application as the quality level of the residence increases.) The basic approach listed here is for slab-on- grade or elevated houses; crawlspace and basement houses will have higher damage levels more quickly due to the main panel and horizontal wiring runs located below the lowest floor level.				
	Threshold Markers	Water level is less than 12 inches above the finished floor level. Minor electrical components and limited wiring are inundated but remain below normal receptacle height.	Water level is between 12 inches and 18 inches above the finished floor level. A significant number of wiring components and limited wiring are inundated, floodwaters above the normal receptacle height.	Water level is between 18 inches and 3 feet above the lowest floor level. A significant number of wiring components and a significant amount of wiring is inundated - floodwaters above normal wall switch height.	Water level is more than 3 feet above the lowest floor level. Most of the wiring components and a significant amount of wiring are inundated - floodwaters above normal wall switch height.
	Common Damage Details	If the main electrical power source is located in the basement, the panel will need to be replaced. All outlets (receptacles, switches, and lights) located in the basement should be replaced. All receptacles, switches, and outlets located above the flood water high mark can be left in place and reused.	Modern Romex wiring that is inundated only for short durations (without wetting the ends/joints/terminations) can be dried and reused. Older nonmetallic cable (with impregnated braided sheathings) should be replaced when wetted. When chemical contaminants are suspected in the floodwaters, all inundated electrical wiring and components will require replacement.	Modern Romex wiring that is inundated only for short durations while wetting the ends/joints/terminations should be replaced. Older non-metallic cable (with impregnated braided sheathings) should be replaced when wetted. When chemical contaminants are suspected in the floodwaters, all inundated electrical wiring and components will require replacement.	Modern Romex wiring that is inundated only for long durations should be replaced. Older nonmetallic cable (with impregnated braided sheathings) should be replaced when wetted. When chemical contaminants are suspected in the floodwaters, all inundated electrical wiring and components will require replacement.

HVAC		0-25%	25-50%	50-75%	Over 75%
Description	The base HVAC system is a forced-air heating system (furnace) with ductwork. The air handler system is located inside the thermal barrier of the house. The percent damaged will be less for a boiler. A boiler system has a sealed piping system to distribute the heat while the furnace uses a duct system. Ducts with water infiltration will need to be cleaned, repaired, and re-insulated. By contrast, a boiler piping system only needs to have the distribution piping clean and re-insulated. Note: Old duct and HVAC insulation may contain asbestos - use appropriate caution and adjust the costs for removal, if found. A gas-fired or oil-fired furnace located in a basement or crawlspace will require replacement of the furnace assembly as soon as 12 inches of floodwaters are present. This will require an adjustment of the percent damaged to 75%, as soon as the water reaches the firebox level of this heating equipment. A central air conditioner or heat pump will have a ducted air distribution system. The outside condenser unit(s) will require reconditioning after any flooding conditions.				
Threshold Markers		**Water level is less than 6 inches above the lowest floor level.** **Water level is in the lower ducts but not into the air handler or equipment operating system.** **The condenser unit may be reconditioned if the water level is less than 6 inches from the bottom of the appliance. If the condenser unit is located below the flood level, it will need to be replaced.**	**Water level is between 6 inches and 12 inches above the finished floor level.** **Water level is into the lower ducts and the air handler, but not into the equipment operating system.** **The condenser unit may be reconditioned if the water level is up to 12 inches from the bottom of the appliance. If the condenser unit is located below the flood level, it will need to be replaced.**	**Water level is between 12 inches and 3 feet above the finished floor level.** **Water level is into the lower ducts, air handler, and the equipment operating system.** **The fuel-fired equipment (burners/controls) is inundated.** **The condenser unit needs to be replaced.**	**Water level is more than 3 feet above the lowest floor level.** **Water level is into the duct distribution system, air handler, and the equipment operating system.** **The fuel-fired equipment (burners/controls) is inundated.** **The condenser unit needs to be replaced.**
Common Damage		If HVAC equipment (furnace, air handler, heat pump) are located in the basement or the under floor areas, the equipment should be reconditioned or replaced. Water-inundated duct insulation should be removed and replaced. If the duct insulation is integral to the ducts (duct board or secured interior duct liners), the ducts should be replaced. All ducts that are being reused will require cleaning.	If portions of the HVAC equipment (furnace, air handler, heat pump) are located in the basement or the under floor areas, the equipment should be reconditioned or replaced. Water-inundated duct insulation should be removed and replaced. If the duct insulation is integral to the ducts (duct board or secured interior duct liners), the ducts should be replaced. All ducts that are being reused will require cleaning.	Portions of the HVAC equipment (furnace, air handler, heat pump) should be replaced. Water-inundated duct insulation should be removed and replaced. If the duct insulation is integral to the ducts (duct board or secured interior duct liners), the ducts should be replaced. All ducts that are being reused will require cleaning.	All HVAC equipment (furnace, air handler, heat pump) should be replaced. Water-inundated duct insulation should be removed and replaced. If the duct insulation is integral to the ducts (duct board or secured interior duct liners), the ducts should be replaced. All ducts that are being reused will require cleaning.

SAMPLE HANDOUT FOR RESIDENTS

INSERT COMMUNITY LETTERHEAD

Information Regarding Cleanup of Damaged Structures within the Floodplain.

Repairs to damaged buildings located within the floodplain require a permit from the building department and/or the Floodplain Administrator.

1. You **MUST** obtain a building permit before you repair, alter, or replace any of the following items:
   a. Roof
   b. Walls
   c. Siding
   d. Plaster
   e. Cabinets
   f. Flooring
   g. Electrical systems
   h. Plumbing
   i. Heating
   j. Air conditioning units
   k. Foundation

2. The permit office must conduct a damage assessment of the building. This inspection will determine if a structure is more than 50% damaged (Substantially Damaged). If a structure is found to be substantially damaged, the structure may not be repaired until it meets current flood protection requirements. It is imperative that the community permit office is contacted prior to taking any actions to repair damage related to the flood.

3. You may proceed with cleanup activities and temporary emergency repairs to prevent further deterioration, such as preventing the spread of mold and/or mildew, without a permit. These include:
   a. Removing and disposing of damaged contents, carpeting, wallboard, and insulation.
   b. Hosing and scrubbing, or cleaning floors, walls, and ductwork.
   c. Covering holes in roofs or walls and covering windows to prevent the weather from inflicting further damage.
   d. Removing sagging ceilings, shoring up broken foundations, and other actions to make the building safe to enter.

Prior to proceeding with cleanup activities that are allowed without a permit, you should thoroughly document the condition of the building by photographing the inside and outside of all areas that are being affected by the cleanup/emergency repairs.

NOTE: BUILDING REPAIRS AND STRUCTURAL IMPROVEMENTS ARE NOT ALLOWED WITHOUT A PERMIT.

THE BUILDING DEPARTMENT IS OPEN FROM _____.

CALL AHEAD FOR APPOINTMENTS

QUESTIONS, PLEASE CONTACT _____ AT _____.

SAMPLE PRESS RELEASE

RESIDENTS IN (COMMUNITY) WITH FLOOD DAMAGE REMINDED OF PERMIT REQUIREMENTS

As property owners in (community) begin clean-up and repairs following recent flooding, the (community permit office) is reminding residents to obtaining permits before repairing or rebuilding flood-damaged structures.

Permits must be obtained for any construction or development activity in a floodplain area, including the repair or reconstruction of structures damaged by flooding.

Special conditions apply to buildings in which the total cost of repairs is 50 percent or more of the structure's equalized assessed value. If a building is found to be damaged 50 percent or more, regulations require that repairs not begin until compliance with the local floodplain ordinance is demonstrated. In some cases, that may require elevating or flood-proofing the structure to reduce the potential for future flood damage.

Repair costs must be calculated by assuming the building will be fully repaired to its pre-damaged condition, even if the owner decides to do less. The total cost calculation must include structural materials, finish materials and labor, even if the owner chooses to do his or her own repairs. The (community) also tracks cumulative damages caused by multiple flood events.

State and federal assistance may be available to property owners to reduce the chances of future flood damage. Mitigation assistance may cover costs of relocation, or for elevating or purchasing flood-damaged structures. Residents with a flood insurance policy may also be eligible to obtain up to $30,000 to protect a structure from future flood damage.

Property owners and residents with flood-damaged buildings should contact (local building and zoning administrator) for more information on repair and reconstruction permits.

SAMPLE LETTER TO OWNERS

DATE
OWNER Address

Dear Property Owner:

As a result of the recent flooding <Your Community Name> staff will be inspecting buildings throughout the community as required by the Federal Emergency Management Agency (FEMA), the Department of Natural Resources (DNR) and <Community Ordinance Section>, of the <Community Name> Floodplain Ordinance to conduct substantial damage assessments on all floodplain residences and business. Substantial damage occurs when the total cost to repair a structure (including labor and materials) to its pre-damaged condition equals or exceeds 50% of the equalized assessed value of the building prior to damage (whether or not repairs are actually done). These inspections apply to all structures within the Special Flood Hazard Area (SFHA) as shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) or other floodplain maps as adopted by <Community Name>.

We will be conducting damage evaluations/inspections over the next several weeks. After the inspection has completed the substantial damage determination process, a written determination will be mailed to the owners of the inspected structures. All residences and businesses having sustained substantial damage are required to comply with state and local floodplain regulations.

Please be advised that all repairs, reconstruction and new construction are subject to the provisions of the <Community Name> and will require permits. Enclosed you will find a Zoning/Setback Permit Application and Floodplain Estimate Worksheet. Please complete both forms and return them to the <Community Name> Zoning/Building Department. Be sure to list the cost of labor and materials for all repairs or reconstruction that is needed to restore your structure to a pre-flood condition. Any labor conducted by the homeowner must also include the average labor cost for completing the work. Construction activities that are undertaken without permits are violations and may results in legal actions.

(Optional) Please note there will be no cost for permits. <Community Name> has waived the fees for any structure damaged by the flooding. If you do not have any interior or exterior damage, please state that on the "Floodplain Permit Estimate" sheet, sign and date it and return it to our office.

Damage evaluations will be conducted over the next few weeks. To set up an appointment or ask questions; please call <Phone Number> between the hours of 8:00 AM and 4:30 PM, Monday through Friday.

We thank you in advance for your cooperation in this matter.

Sincerely,

Mary Smith
<Community Name>
Department of Planning and Zoning/Building Inspections
888-999-0000
Mary.Smith@floodville.wi.gov

Cc:

SAMPLE LETTERS TO OWNERS – SECOND NOTICE

Second Notice

DATE
ADDRESS

Dear Property Owner:

This is a follow up letter to the letter sent on <DATE>. As a result of the recent flooding <Community Name> staff are required by the Federal Emergency Management Agency (FEMA), the Department of Natural Resources (DNR) and <Section Number of Ordinance>, of the <Community Name> Floodplain Ordinance to conduct substantial damage assessments on all structures located in the Special Flood Hazard Areas (SFHA) as shown within the Special Flood Hazard Area (SFHA) as shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) or other floodplain maps as adopted by <Community Name>.

If our office does not complete an interior inspection of the home, we are required to do an estimated substantial damage assessment from exterior observations such as heights of water lines and observation from neighboring properties. All substantial damage reports will be submitted to FEMA and DNR.

If you wish would avoid an exterior estimation of your structure, please contact us at <phone number> between the hours of 8:00 AM and 4:30 PM, Monday through Friday to set up an appointment for an interior inspection of your structure. The inspection requires approximately 30 minutes to inspect for exterior and interior damage. After the County has completed the determination process, a written determination will be mailed to you for review. Any structures having sustained substantial damage will be required to comply with the <Community Name> Floodplain Ordinance.

Please be advised that all repairs, reconstruction and new construction are subject to the provisions of the <Community Name> and will require permits. Enclosed you will find a Zoning/Setback Permit Application and Floodplain Estimate Worksheet. Please complete both forms and return them to the <Community Name> Zoning/Building Department. Be sure to list the cost of labor and materials for all repairs or reconstruction that are needed to restore your structure to a pre-flood condition. Any labor conducted by the homeowner must also include the actual average labor cost for completing the work as if someone had been hired. Construction activities that are undertaken without permits are violations and may result in legal actions.

(Optional) Please note there will be no cost for permits. <Community Name> has waived the fees for any structure damaged by the flooding.

If you have any questions on this issue, please contact me at (888) 999-0000

Sincerely,

Mary Smith
<Community Name>
Department of Planning and Zoning/Building Inspections
888-999-0000
Mary.Smith@floodville.wi.gov

Cc:

EXAMPLE NOTICE OF SUBSTANITAL DAMAGE ESTIMATION – SD

DATE
ADDRESS

RE: Notice of Substantial Damage Estimation at [SITE ADDRESS].

Dear <OWNER>:

This is a follow-up letter to previous correspondence that we sent regarding the recent flooding and its potential impact to your structure. A detailed report of the damage incurred is included with this letter. Damages listed below do not include previous flood damage or improvements and the Equalized Assessed Value (EAV) only refers to the structure that was inspected.

Community Number:	<170XXX>
Parcel Zone Information:	Zone <zone>
Equalized Assessed Value:	$<Value>
Flood Damage:	
September 2019	$<Value>
Total damages	$<Value>
Percent Damaged:	<Value%>
Ordinance Requirement:	Mitigation (elevation, removal)

As a result of the required investigations regarding flood damage sustained to the structure located within the Special Flood Hazard Area (SFHA) of <Community Name>; we have determined that the structure located at <ADDRESS> has been damaged in excess of 50% of it's equalized assessed value and is **substantially damaged**, therefore, it must be brought into compliance with the <Community Name> Floodplain Ordinance prior to any repair or reconstruction. For this structure to be in compliance with the ordinance, the structure must be elevated, moved outside the floodplain or demolished.

We would be pleased to meet with you and your designated representative (architect/builder) to discuss the requirements and potential options for bringing the structure into compliance. The lowest floor of the structure must be elevated to or above the Flood Protection Elevation (FPE). The most significant requirement is that the ordinance requires that lowest floor must be elevated to or above the base flood elevation (BFE), as defined in the ordinance, which is defined on the FIRM. You may wish to contact your insurance agent to understand how raising the lowest floor higher than the minimum required elevation can reduce NFIP flood insurance premiums.

Construction activities that are undertaken without a proper permit are violations of the <Community Name> Floodplain Ordinance and may result in citations, fines, the removal of the non-compliant construction, or other legal action.

(OPTIONAL) Appeals to the Board of Adjustment/Appeals may be taken by any person aggrieved, or by any officer or department of the municipality affected by any decision of the zoning administrator or other administrative officer. Such appeal shall be taken within 30 days of the date of this decision.

(OPTIONAL) An option you may wish to explore is the Flood Mitigation Program managed by the <Community Name> Emergency Management office. This voluntary program has provided money to purchase

at risk structures at pre-flood values. The amount of money that may become available has yet to be determined; however, those "substantially damaged" would be the highest priority especially if it is your principal residence. With participation in that program, we would work with you on the time limit for removal. The department and contact number for the flood mitigation purchase program is the Emergency Government office at (888) 999-0000. Otherwise, contact this department at (888) 999-0000 for any other questions pertaining to this matter. You may also find assistance through your flood insurance policy.

If you have any questions regarding this issue, please contact me at (888) 999-0000.

Sincerely,

Mary Smith
<Community Name>
Department of Planning and Zoning/Building Inspections
888-999-0000
Mary.Smith@floodville.wi.gov

Cc:

SAMPLE LETTER TO OWNERS SUBSTANTIAL DAMAGE DETERMINATION

DATE
ADDRESS OWNER

RE: Notice of Substantial Damage Estimation at [SITE ADDRESS].

Dear <OWNER>:

This is a follow-up letter to previous correspondence that we sent regarding the recent flooding and its potential impact to your structure. A detailed report of the damage incurred is included with this letter. Damages listed below do not include previous flood damage or improvements and the Equalized Assessed Value (EAV) only refers to the structure that was inspected.

Community Number:	<170XXX>
Parcel Zone Information:	Zone <zone>
Equalized Assessed Value:	$<Value>
Flood Damage:	
September 2019	$<Value>
Total damages	$<Value>
Percent Damaged:	<Value%>

As a result of the required investigations regarding flood damage sustained to structures located within the floodplain of <Community Name>; we have determined the dwelling located at <ADDRESS> has not been substantially damaged in excess of 50% of its equalized assessed value. However, the structure did receive damage as a result of flood waters, which means this report must be kept on file and any future flood damage will be added to this amount. Once a structure reaches 50% of its equalized assessed value, the structure must be brought into compliance with floodplain regulations.

Before any repairs and/or reconstruction can take place, a Zoning and Land Use permit is required. With this application please include an itemized list of all repairs/reconstruction including cost of labor and materials. Review and approval of this permit is required prior to repairs or construction taking place. Another determination will be required to determine if all proposed improvements resulted in substantial improvements, which would require the structure to come into compliance with the floodplain ordinance.

Construction activities that are undertaken without a proper permit are violations of the <Community Name> Floodplain Ordinance and may result in citations, fines, the removal of the non-compliant construction, or other legal action.

It is advisable for you, as an owner of a structure that is subject to flooding to take measures to protect yourself. Number one is to purchase flood insurance for recover from future flood damage. Number two is to explore measures to elevate your home to prevent against future damage that exceeds 50% of the equalized assessed value.

(OPTIONAL) Appeals to the Board of Adjustment/Appeals may be taken by any person aggrieved, or by any officer or department of the municipality affected by any decision of the zoning administrator or other administrative officer. Such appeal shall be taken within 30 days of the date of this decision.

(OPTIONAL) An option you may wish to explore is the Flood Mitigation Program managed by the <Community Name> Emergency Management office. This voluntary program has provided money to purchase at risk structures at pre-flood values. The amount of money that may become available has yet to be determined; however, "substantially damaged" would be the highest priority especially if it is your principal residence. With participation in that program, we would work with you on the time limit for removal. The department and contact number for the flood mitigation purchase program is the Emergency Government office at (888) 999-0000. Otherwise, contact this department at (888) 999-0000 for any other questions pertaining to this matter. You may also find assistance through your flood insurance policy.

If you have any questions regarding this issue, please contact me at (888) 999-0000.

Sincerely,

Mary Smith
<Community Name>
Department of Planning and Zoning/Building Inspections
888-999-0000
Mary.Smith@floodville.wi.gov

Cc:

SAMPLE NOTICE TO POST ON STRUCTURES

⇨ NOTICE ⇦

Because this building is located in a floodplain and was damaged by flooding, a damage assessment must be conducted by the (village or county).

Before occupying this building or doing any repair work you must call the (city, village or county) Department of Zoning and Building Safety at (___) _____ to schedule and inspection.

Failure to obtain reconstruction approval may result in a penalty.

Hazard Mitigation Assistance

The Federal Emergency Management Agency (FEMA) and state mitigation programs provide opportunities to reduce the risk to individuals and property from natural hazards while simultaneously reducing reliance on Federal disaster funds. Mitigation programs can be implemented before, during, and after the flood disaster.

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) assists in implementing long-term multi-hazard mitigation measures following major disaster declarations. Funding is available to implement projects in accordance with State, Tribal, and local priorities.

Flood Mitigation Assistance

The Flood Mitigation Assistance (FMA) program makes funds available on an annual basis so that measures can be taken to reduce or eliminate risk of flood damage to buildings insured under the National Flood Insurance Program (NFIP).

Building Resilient Infrastructure and Communities

The Building Resilient Infrastructure and Communities (BRIC) program is an annual program that will be funded for the first time in the 2020 Federal Fiscal Year. BRIC provides an annual allocation based on the overall amount of disaster funds paid out across the country. The program aims to promote a national culture of preparedness and mitigation, funding projects that reduce vulnerability, enhance public safety, and improve the resiliency of community, and critical infrastructure to natural hazards.

WDNR Municipal Flood Control Grant

The Wisconsin Department of Natural Resources (WDNR) has a long history of funding and completing mitigation projects. State funds are often used to provide cost sharing to compliment Federal mitigation projects.

- Cities, villages, towns, tribes and metropolitan sewerage districts are eligible
- Communities must be in good standing in the NFIP
- Eligible projects are: acquisition and removal of structures and vacant lands; Floodproofing and elevation of structures; riparian restoration projects; construction of structures for storage and transmission of stormwater; and preparation of flood insurance studies and other flood mapping projects.

What is Mitigation? Mitigation is any action taken to reduce or eliminate long term risk to human life and property from hazards. Mitigation focuses on breaking the cycle of disaster damage, reconstruction, and repeated damage.

Cost Share Requirements

Program	Mitigation Activity Grant (Percent Federal/non-Federal)
HMGP	Up to 75/25
BRIC	Up to 75/25
FMA	Up to 75/25, 90/10, or 100%

Eligible Activities

- Property Acquisition and Structure Demolition or Relocation
- Structure Elevation
- Dry Floodproofing of Historic Residential Structures
- Dry Floodproofing of Non-residential Structures
- Minor Localized Flood Reduction Projects
- Structural Retrofitting of Existing Buildings
- Non-structural Retrofitting of Existing Buildings and Facilities
- Safe Room Construction
- Infrastructure Retrofit
- Soil Stabilization
- Wildfire Mitigation
- Post-disaster Code Enforcement
- 5% Initiative Projects

Who is Eligible to Apply?

States governments are eligible applicants. Each State government shall designate one agency to serve as the Applicant for each mitigation program. In Wisconsin, that agency is the Wisconsin Emergency Management (WEM). Individuals and businesses may not apply directly to FEMA. An approved and adopted Local Mitigation Plan is a prerequisite to apply for Federal mitigation funding.

Requests for state mitigation funding should be made to WEM through the State Hazard Mitigation Officer.

Eligibility Requirements

All mitigation projects must be cost-effective, meet both engineering and technical feasibility criteria, and clear Environmental Planning and Historic Preservation requirements in accordance with Federal Guidance. In addition, all mitigation activities must adhere to all relevant statutes, regulations, and requirements including other applicable Federal, State, Indian Tribal, and local laws, implementing regulations, and Executive Orders. Others requirements are:

- Local NFIP Participation Requirement
- Permanent or long-term solution
- Cost/Benefit Development
- Cost Share Requirement
- Environmentally Sound
- Complements State Priorities/ Local Mitigation Plan
- Supported by community
- Strictly Voluntary Participation
- Selected through a competitive process

Please contact your State Hazard Mitigation Officer
Robyn Fennig at
DMAWEMHazardMitigation@wisconsin.gov

For additional information visit www.FEMA.gov or download the Hazard Mitigation Unified Guidance at
www.fema.gov/library/viewRecord.do?id=4225

Protect Your Home From Flood Damages
Increased Cost of Compliance (ICC)

In Wisconsin, there are approximately 60,000 structures in the regulatory or 1% chance floodplain across the state. Floods are by far the most common natural disaster, accounting for well over 90% of the declared disasters. There was an estimated $209 million of flood-related damage in Wisconsin in 2018. Unfortunately, much of this flood damage occurs on the same properties over and over again. For this reason, flood insurance coverage pays to mitigate these properties to reduce the chances of future flooding.

Increased Cost of Compliance (ICC) Program:

- provides up to $30,000 in addition to the flood insurance claims.
- ICC can be used to floodproof, relocate, elevate, demolish (F.R.E.D.)
- structure must be located in a floodplain
- structure must have a flood insurance policy in effect
- structure must be determined to be substantially damaged (or cumulatively damaged) by flooding beyond 50% of the value of when the damage first occurred.
- bring structure into compliance with F.R.E.D requirements in the local ordinance

The two most common types of ICC mitigation used in Wisconsin is are:

Relocation:

Relocating structures to higher ground or purchasing flood proof property is the safest way to protect against flooding and reduce the liability and cost to the community.

Relocating initially can be expensive, but in the long run it can be less expensive than repetitive flood damages or high flood insurance premiums

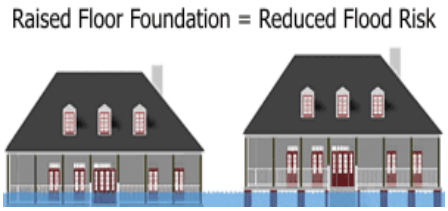
Elevation:

Three methods to elevate:

- Constructing on crawlspace,
- Elevating on compacted fill, or
- Elevating on piles or piers.

Elevation method is dependent on the structure's condition, flood hazard, local floodplain regulations, and owner's financial condition.

When elevating, it is essential for all utilities (air conditioner, water heater, furnace, etc.) to be elevated at or above the Flood Protection Elevati



Home being moved to higher ground.

For more information contact the Wisconsin NFIP Coordinating Office at (608) 266-3093 or go to: *https://www.fema.gov/increased-cost-compliance-coverage*