

# Post Flood Guidance For Local Floodplain Administrators



*Tippecanoe River, White County February 2008*

**April 2021**

**DNR**

Indiana Department  
of Natural Resources



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**Text Shown in Blue is either linked to the location in the document or a website.**

## Foreword

The goal of this handbook is to provide guidance to local permit officials in the tasks associated with a flood event – this includes pre-flood preparation and post-flood responsibilities. Whether or not your community has experienced a flood, it will happen, and you will need to be able to respond to the event to ensure that all post-flood reconstruction in your community's floodplain is compliant.

When established procedures are not in place, the difficulty of performing post-flood tasks is multiplied. A flood event in your community is truly a time of crisis. We hope this handbook will provide you with the tools and guidance necessary to properly respond to a flood event and ensure that your community is meeting all the requirements of your local floodplain regulations. By enforcing your local floodplain regulations, you can help reduce your community's future flood damage.

This handbook focuses mainly on post-flood response; however, the following post-disaster procedures should be implemented after any disaster that affects your community's special flood hazard areas; this includes damage from wind, fire, earthquake, tornado, etc.

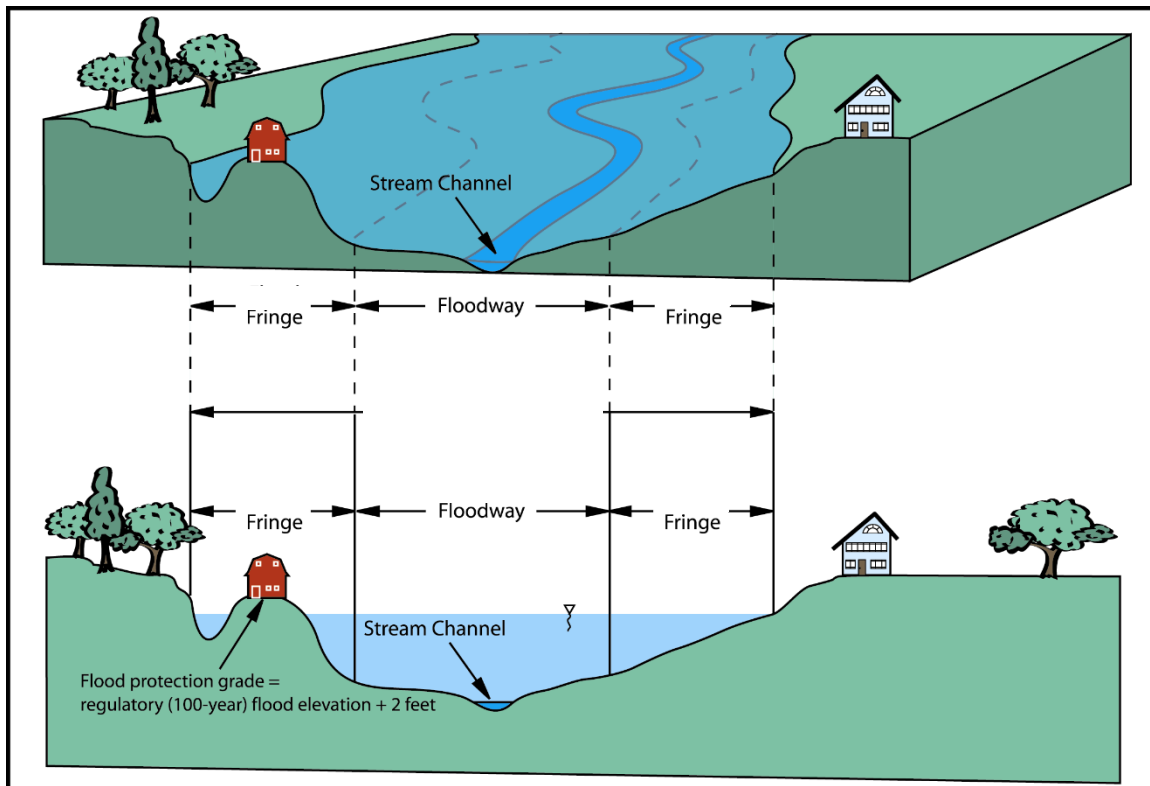


We invite you to visit our homepage at <https://www.in.gov/dnr/water/>, which will provide you with more information on the programs and regulations administered by DNR Division of Water.

## Preparing Before the Flood

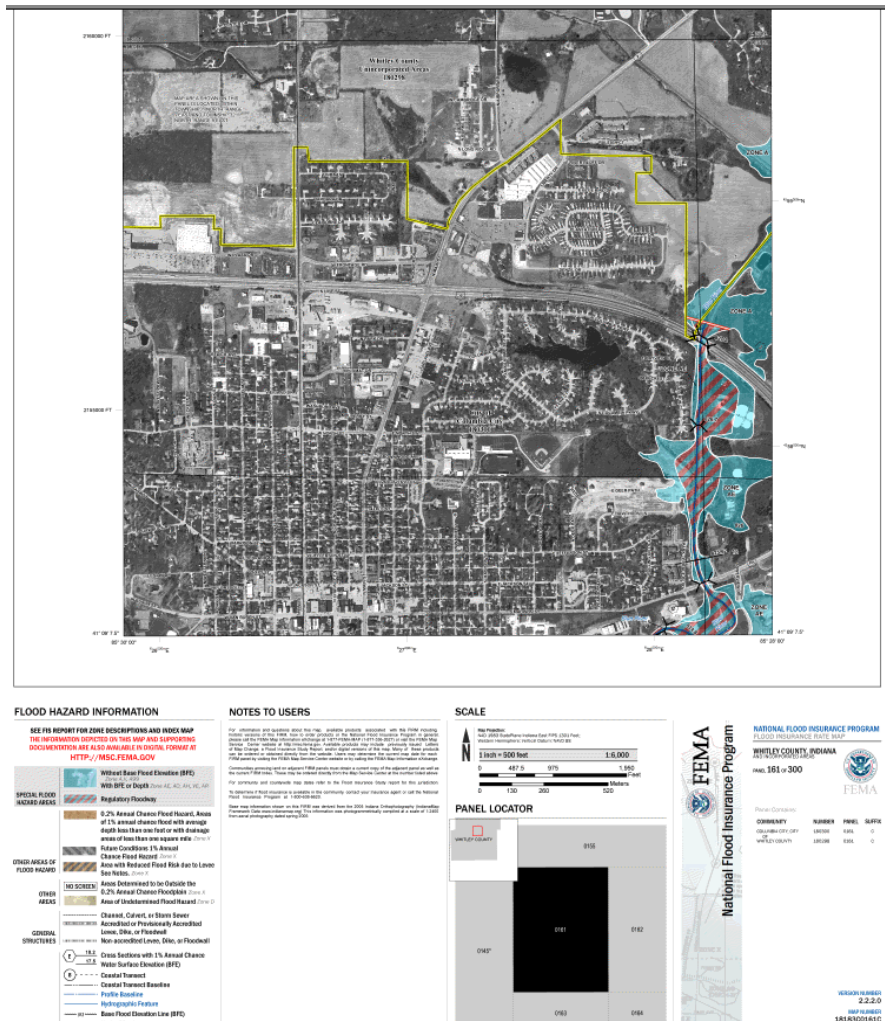
Does it snow every year in Indiana? Of course, it does. Some communities typically have more snow than others, but generally all Indiana communities understand the hazards of a snow event. Even though some communities may do a better job than others, every community has a plan in the event of a snow. They make certain sand and salt are on hand, snowplows are readied, and State Police or National Weather Service reports are monitored. They know who is responsible for which roads, and they have a plan for the order in which roads will be cleared. But what if a community failed to prepare for snow, particularly a large snow event? Naturally, it would be chaotic, and potentially deadly. It is easy to conclude that the better prepared communities are, the more smoothly the process goes.

The same is true for flooding. The better prepared communities are, the more smoothly the process goes. *When* a flood will happen is less predictable than predicting when snow will fall; however, the areas where a flood will strike *are* predictable. Nearly all Indiana communities have some level of floodplain mapping that identifies flood hazards. The areas identified are those that have been determined to be at risk in the event of a 1% annual chance flood. The 1% annual chance floodplain is also known as the 100-year floodplain, regulatory floodplain, base floodplain, and Special Flood Hazard Area (SFHA).



# Become Familiar with your Flood Risks

Local officials should use their floodplain maps and become familiar with the flood risks in their area. One way is to tour the areas that have been identified as a flood hazard. As the tour is being done, a list of the structures at risk should be compiled. Should the community have geographic information systems (GIS) capabilities, the structures known to be at risk could be easily located and identified.



# Permit Development Correctly

Most Indiana communities with flood hazards participate in the National Flood Insurance Program (NFIP). A participation requirement of the NFIP is that communities adopt and enforce floodplain regulations that meet all the federal and Indiana minimum requirements. By ensuring that new construction and substantial improvements to existing structures comply with the local ordinance, the need for future mitigation is eliminated or significantly reduced.

## **Public Awareness**

Only a small percentage of people, in any given community, understand the risks associated with flooding. With the current disclosure laws, some buyers of property are informed that there is a flood risk; however, they may not understand the full implications of that risk.

To increase awareness about the risk of flooding in the community, newspaper articles, public service announcements on radio, television, or social media posts can be used. For example, a community may find that the utility companies servicing the area may be willing to distribute information as an insert with their billings. In addition, educational programs can be implemented within the community. Some resources for these programs are the DNR, Indiana Department of Homeland Security (IDHS), regional planning agency or special district, Federal Emergency Management Agency (FEMA), United States Geological Survey (USGS), and U.S. Army Corps of Engineers (USACE). A great resource for flood insurance information is <https://www.floodsmart.gov/>.

## **Develop a Standard Operating Procedure (SOP)**

What will need to be done? When does it need to be done? Who will do it? What do we need? Where do we get it? There are many questions when preparing for a flood. One of the biggest setbacks to a community during/after a flood is confusion. When officials don't know where to start, valuable time, energy, resources can be wasted, and opportunities can be lost.

One of the most important steps a community can take is to pool its resources, both tangible and intangible. Individuals and groups within the community that are directly involved with flooding issues should compile a list of actions to be taken in time of flooding. Examples of individuals and/or groups that should be involved are local permit official, floodplain administrator, building commissioner, building inspector, plan commission director, sheriff's department, emergency manager, police department, fire department, veterinarian, County Surveyor, DNR, local Soil and Water Conservation District, County Cooperative Extension Service, community officials, Board of Health, Solid Waste Management Districts, and local utility companies. A team approach to floodplain management and flood response will enable the community to collaborate ideas through a diversified group effort.

The individuals involved in the development of an SOP need to consider many factors including, but not limited to:

- What are the flood sources and what areas do they impact?
- Are the flood sources subject to flash flooding, or is there time to prepare?
- What roadways/access roads are at risk?
- Are there individuals in the community trained to lead or participate in a flood fight?
- Are there areas that could be protected by sandbagging?

- Where do we get sandbags and sand?
- Who will prepare and place sandbags?
- What areas will need to be evacuated and when?
- How will areas be evacuated?
- Are there critical facilities at risk?
- Where can a shelter be established?
- Where can victims receive help?
- Who will coordinate with volunteer organizations?
- Are there farm animals that will need to be transported?
- Is there a facility to handle family pets that have to be evacuated or treated?
- Are there hazardous waste/materials that will require special actions?
- Who will document the flood damage—residential/commercial/public?
- Are there any grant programs that will provide financial assistance with post-flood tasks?
- Is there a group or agency that will assist with damage assessments?
- Will all structures be allowed to repair/reconstruct based on State and local regulations?
- Will building permit fees be waived for flood victims?
- Are flood studies that provide base flood elevations and floodway delineations available for all the streams in the community?
- How will information be spread to victims?



Some communities may consider the establishment of a flood warning and response system. Ideally, this system would include flood forecasting, warning, and



emergency preparedness. Communities can coordinate with the IDHS, National Weather Service (NWS), FEMA, USGS, and the USACE for assistance in developing a flood warning and response system.

## **Disaster Recovery Reform Act (DRRA) Section 1206**

Reimbursement to communities may be available under Section 1206 of the DRRA for many post-flood activities. Communities may be reimbursed for building code administration and enforcement, floodplain ordinance administration and enforcement, training of staff in these areas, contracted services for these activities, and completing substantial damage determinations. Communities should remember that reimbursement depends on a federal disaster declaration and the declaration containing public assistance funding. Federal declarations are not made for all flooding events, and not all declarations include public assistance funding.

## **Flood Response**

While various groups will carry out flood-response activities, the following information pertains to the role of the local floodplain administrator.

### **Notify Public of Need for Permit for Repair/Reconstruction**

A natural reaction for flood victims is to try to restore life “back to normal” as soon as possible. This thought process usually does not immediately include the reality of getting the proper permits. For some victims, the reality may be that they will have to elevate their structure. It’s important to encourage flood victims to remove any damaged contents and to begin activities to minimize the damage. This process includes activities such as removing water-soaked carpeting, cleaning, and drying. Anyone working in or around a flood-damaged structure should take safety precautions to avoid illness or injury; however, it should be made clear that property owners need to obtain appropriate permits from the community’s floodplain administrator/building official before beginning repairs or reconstruction. Special attention should be given to any local, State, or federal regulations that may conflict or overlap, as whichever imposes the more stringent restrictions shall prevail.

Public notification can be given through the mass media (newspapers, radio, and television.) Notices can also be posted at sites such as disaster recovery centers or emergency shelters. *(See appendix, page 34, for sample news release.)*

### **Document Damage to Structures – Damage Assessments**

The floodplain administrator and/or authorized staff should visit every area containing structures affected by flooding as soon as access is possible after floodwaters recede. Particularly when large numbers of structures have been flood-damaged, it is recommended that a Depth-Damage Field Estimate worksheet be completed for each structure, indicating the depth (in feet) of floodwaters. *(See appendix, page 17, for worksheet.)* This is done by actual measurement based on

visual watermarks and/or observed flood damage to the structure. The Depth-Damage Field Estimate worksheet captures essential information to make substantial damage determinations for flood-related damages. The damage figures are based on the USACE-published Generic Depth-Damage Relationships. Ideally, a photo of each structure should be taken to accompany the worksheet. This helps identify the structure and document its condition.

While documenting the damage, the floodplain administrator and/or other authorized staff may wish to leave a door tag notice to advise the owner that an initial damage assessment has been done, and that they are to contact the local floodplain administrator (building official) before proceeding with repair/reconstruction, and provide contact information for the floodplain administrator (building official.) ([See appendix, page 32, for door tag notice.](#))

### Needed items:

- Depth-Damage Field Estimate worksheets
- Clipboard
- Community floodplain mapping
- Door tag notices (suggested)
- Tape measure
- Pens/pencils
- Parcel/address information
- Camera (suggested)



Using the Depth-Damage Field Estimate worksheets allows a community to quickly separate flood-damaged structures into three groups:

1. Clearly non-substantial damage (less than 40%)
2. Clearly substantial damage (greater than 50%), and
3. Uncertain whether substantial damage (40-50%)

For structures clearly sustaining non-substantial damage, permits can be issued to repair at the existing elevation, provided no additional improvements or additions will be made, and the repair does not conflict with any other regulations.

### **Substantial Damage**

A structure is considered substantially damaged when the cost of repairing the structure back to its pre-damaged condition equals or exceeds 50% of the fair market value of the pre-damaged structure **(unless the community has adopted a more restrictive standard).**

Publications FEMA 213, Answers to Questions About Substantially Damaged Buildings & FEMA P-758, SI/SD Desk Reference, are available at:

[fema.gov](http://fema.gov)

Clearly substantially damaged structures must be brought into compliance with the community's building protection requirements. *(See appendix, page 27 for building protection requirements.)*

There may be occasions when obvious structural damage has occurred, or poor condition of the existing home may be such that even the lesser depths of floodwater appear to have caused great damage. This should be noted on the Depth-Damage Field Estimate worksheet. If you are uncertain whether substantial damage has occurred, additional improvements and/or additions are proposed, or there is a dispute regarding a damage assessment, more information will be required in order to accurately determine whether they are substantially damaged.

To more accurately determine the extent of damage when a completed Depth-Damage Field Estimate form indicates more information is needed or when no Depth-Damage Field Estimate has been completed, the permit official needs to have two pieces of information: the structure's pre-damaged fair market value and the cost to restore the structure back to its pre-damaged condition. If additional improvements or additions are planned, the cost of the additional improvements or additions must also be considered. In this task, the main objective for the permit official is to be consistent in the method used. Consistency leaves little room for argument about equality. The permit official needs to maintain the documentation in the permit file. This will become especially important when the community is reviewed by the State or FEMA for NFIP compliance.

A condensed procedural guide is provided in the index. *(See appendix, page 30, for Post-Flood Procedure after Initial Depth-Damage Field Estimate.)* In addition to completing Depth-Damage Field Estimates worksheets for each flood-damaged

structure, the community should compile a complete listing of the damaged structures.

## Structure's Pre-damaged Value

The structure's pre-damaged value is the fair market value of the structure only, excluding the land. Some ways of determining the value are: a professional appraisal or tax assessment records.

## Cost of Repairs

The two main items on a cost of repairs list should include the materials used and the cost of labor. When calculating the cost of materials and labor, the fair market value must be used—even if the materials and/or labor are donated. Some exclusions in the cost of repair include debris removal, clean-up, building plans, and permit fees.

### Substantial Damage Estimator (SDE) 3.0

SDE software provides guidance on determining if a building is substantially damaged in accordance with the National Flood Insurance Program (NFIP) regulations. This is another tool that may be used to determine a damage estimate for structures. For a copy of the SDE software call FEMA at 800-480-2520.

## Determining Floodplain Status

Another important step in the permitting process is to determine the structure's floodplain status. Is it located in the floodway or the flood fringe? This process can be accomplished by using the floodplain mapping for the community or by having the DNR complete a **Floodplain Analysis/Regulatory Assessment (FARA)** for the structure in question. *(See appendix, page 39, for FARA Form.)* A FARA may also be complete by using the Indiana Floodplain Information Portal, which may be accessed at <https://www.in.gov/dnr/water/>.

Types of maps used may be Flood Insurance Rate Maps (FIRM), the DNR Best Available Floodplain Layer (BAFL), or the area noted by the community as being flood prone. Keep in mind that these maps can only be used if the floodway limits and elevations for the 1% annual chance flood (also known as 100-year flood, regulatory flood, or base flood) are shown for the water body involved. If the community does not have floodplain mapping that provides adequate information, a FARA from DNR will be needed. **FARA requests should include a statement that the structure was damaged by flood.**

## Repairs and Reconstruction in a Non-boundary River Floodway

For flood-damaged non-residential structures, prior written approval (Construction in a Floodway permit) is required from DNR. For reconstruction of substantially damaged residential structures located in floodway (non-boundary floodway), written approval and/or review from DNR is required. *(See appendix, page 19, for checklist for reconstruction of residences in a floodway.)* Written approval and/or review is not

required from the DNR, for non-substantially damaged residential structures in the floodway.

## **Repairs and Reconstruction in a Boundary River Floodway (Ohio River)**

For flood-damaged non-residential structures, prior written approval (Construction in a Floodway permit) is required from DNR. Written approval (Construction in a Floodway permit) from DNR is required for repairs or reconstruction of a substantially damaged residential structure in the floodway of the Ohio River. Written approval is not required from the DNR for non-substantially damaged residential structures in the floodway.



## **Following the Local Ordinance**

Once damage determinations are made, floodplain status has been determined, and any applicable state and/or federal permits have been obtained, the permit official may proceed to the next level. The permit official is responsible for seeing that all the applicable requirements of the community's floodplain regulations are met.

## **Building Protection Requirements**

The building protection requirements and options outlined in the community's floodplain regulations should be referred to for guidance during the permitting process. *(See appendix, page 27, for building protection requirements.)* If a structure has been substantially damaged or substantially improved, the structure must be brought into compliance with the building protection requirements of the local floodplain ordinance. Some communities are more restrictive and require structures that have been previously altered also be brought into compliance, and some communities may not allow repair/reconstruction. This includes elevating the structure to/above the FPG, using flood-resistant materials to/below the FPG, adequate/compliant flood vents for enclosures below the FPG, protecting utilities, and ensuring that all other local floodplain regulations are met. An "as-built" Elevation Certificate is needed to verify compliance.



## Increased Cost of Compliance

A home or business if damaged by a flood may be required to meet certain building protection requirements in your community to reduce future flood damage before they repair or rebuild. To help cover the costs of meeting those requirements, the National Flood Insurance Program includes Increased Cost of Compliance (ICC) coverage.

Flood insurance policyholders in an SFHA can get up to \$30,000 to help pay the cost to bring their home or business into compliance with the community's floodplain ordinance.

The local floodplain administrator plays a key role in the ICC process.

## Written Notice

A community may choose to send written notice to all owners of flood-damaged structures. Owners who wish to claim ICC benefits will require a written notice of substantial damage (or repetitive loss) from the community in order to proceed. For ICC claims, the floodplain administrator (building official) will also need to verify that the finished construction is compliant in order for the insured to receive full payment under the ICC process. It also recommended that the local floodplain administrator or building official coordinate with the insurance adjustors involved during the repair/reconstruction process to ensure any additional requirements are met. ([See appendix, pages 36-38, for sample damage determination letters.](#))

## Permits

While some property owners will seek out the local floodplain administrator (building official) for guidance and permits, that is not the case for all affected property owners. It is vital to follow up with all owners of flood damaged structures to ensure that the requirements are being met and that all applicable permits are obtained.

## **Document Retention**

Copies of all flood-related documents should be kept in the community's permit file. Depth-Damage Field Estimate worksheets, detailed cost estimates for repair/reconstruction, appraisals/assessments, and other information gathered for substantial damage determinations, Floodplain Analysis and Regulatory Assessments (FARA), approvals/permits, Elevation Certificates or other "as-built" certifications, inventory of flood-damaged structures, and any other supporting documentation should be maintained in the permit file. Permit files for development in the SFHA, including all flood related documents, must be maintained in perpetuity.

## **Additional Permits**

Additional permits, other than the local permit, may be required. For example, the Indiana Flood Control Act (IC 14-28-1) requires a state permit for construction in the floodway. Other permits may be needed from the Department of Health, Indiana Department of Environmental Management, and/or USACE.

## **Document Extent of Flooding**

Depending on the size of the community and the area affected, the task of documenting the extent of flooding can be daunting; however, this historical data is vital. Photographs and video of the affected area can be taken to assist in documenting the extent of damage to structures. Boundaries of inundation and high-water marks can be set to establish the area and height the water encompassed.

## Conclusion

Comprehensive pre-flood preparedness and post-flood response are essential for a successful floodplain management program. By being proactive and prepared, the local floodplain administrator ensures that reconstruction activities in the community's floodplain proceed in a manner to reduce or eliminate future flood damage.

This guide focuses mainly on post-flood response. But remember, the preceding post-disaster procedures should be implemented after any disaster that affects your community's special flood hazard areas. This includes damage from wind, fire, earthquake, tornado, etc. Should you have questions on post-flood or post-disaster responsibilities, please contact the Floodplain Management Section of the DNR Division of Water at:

**Floodplain Management Section**  
**Division of Water**  
**Indiana Department of Natural Resources**  
**402 West Washington Street, Room W204**  
**Indianapolis, IN 47204-2641**  
**317-232-4160 or Toll Free: 877-928-3755**  
[DNRFPM@dnr.IN.gov](mailto:DNRFPM@dnr.IN.gov)  
<https://www.in.gov/dnr/water/>



## **Appendix**

# DEPTH DAMAGE FIELD ESTIMATE

(jurisdiction)

(County)

(owner or renter)

Spoken to? Yes / No

(phone)

(street address)

(PO Community)

**IN**

(zip)

DATE OF INSPECTION

DATE OF CONSTRUCTION

FIRM PANEL

SOURCE OF DAMAGE

DURATION OF FLOODING

TIME OF INSPECTION

/ /

/ /

Flood

/ /

M.

Structure located in:

Floodway

Flood Fringe

Floodway/Flood Fringe Limits  
Not Determined

Outside Identified Floodplain

TYPE OF STRUCTURE:

ONE STORY

TWO OR MORE

SPLIT LEVEL

MANUFACTURED HOME

Does structure have a basement?

	Depth in feet to LAG	ONE STORY		TWO OR MORE		SPLIT LEVEL		MANUFACTURED HOME	
		Yes	No	Yes	No	Yes	No	Yes	No
Structures with damages of ≥ 50% require use of Post-FIRM flood protection standards.	16	81.1%	80.7%	76.4%	69.2%	69.3%	84.4%	SD	SD
	15	81.1%	80.2%	76.4%	67.7%	69.3%	83.8%	SD	SD
	14	81.1%	79.5%	75.4%	65.9%	69.3%	81.7%	SD	SD
	13	81.1%	78.5%	73.7%	63.8%	69.3%	78.4%	SD	SD
	12	81.1%	77.2%	71.4%	61.4%	68.8%	73.9%	SD	SD
	11	81.1%	75.4%	68.4%	58.7%	67.2%	68.6%	SD	SD
	10	80.1%	73.2%	64.8%	55.7%	64.8%	62.6%	SD	SD
Structures with damage estimates between 40% & 50% require further information to determine which flood protection standards apply.	8	74.2%	67.2%	56.4%	<b>48.8%</b>	57.8%	<b>49.2%</b>	SD	SD
	7	69.8%	63.2%	51.8%	<b>44.9%</b>	53.5%	<b>42.3%</b>	SD	SD
	6	64.5%	58.6%	<b>46.9%</b>	<b>40.7%</b>	<b>48.6%</b>	35.5%	SD	SD
	5	58.6%	53.2%	<b>41.9%</b>	36.2%	<b>43.8%</b>	28.9%	SD	SD
	4	52.2%	<b>47.1%</b>	36.9%	31.4%	38.6%	22.8%	SD	SD
	3	<b>45.5%</b>	<b>40.1%</b>	31.9%	26.3%	33.4%	17.4%		
	2	38.7%	32.1%	27.0%	20.9%	28.2%	12.9%		
Post-FIRM flood protection standards may be used to repair structures with damages of <50% but are not required.	1	32.0%	23.3%	22.3%	15.2%	23.2%	9.4%		
	0	25.5%	13.4%	17.9%	9.3%	18.5%	7.2%		
	-1	19.4%	2.5%	13.9%	3.0%	14.2%	6.4%		
	-2	13.8%	0.0%	10.2%	0.0%	10.4%	0.0%		
	-3	9.0%		7.2%		7.2%			
	-4	5.2%		4.7%		4.7%			
	-5	2.4%		2.9%		3.1%			
	-6	0.8%		1.9%		2.5%			
-7	0.7%		1.7%						
-8	0.0%		1.7%						

Notes

For help completing and using this form, see explanatory notes on reverse.

INSPECTED BY:

(name/telephone)

Posted (Yes / No)

/ / as:

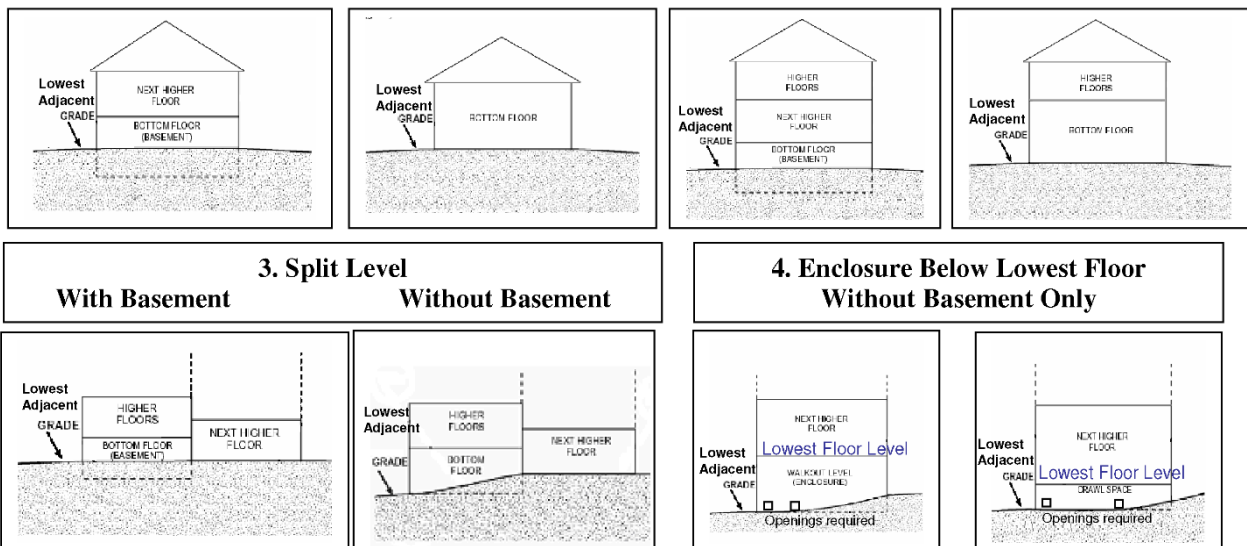
INITIAL FIRM DATE

Rev

The **DEPTH-DAMAGE FIELD ESTIMATE** worksheet captures essential information to make Substantial Damage (SD) determinations for flood-related damages. It is intended that the worksheet should be mostly self-explanatory. The depth-damage figures are based upon the USACE-published Generic Depth-Damage Relationships. The following are a few comments and clarifications that will assist you when filling out the worksheet.

1. **Jurisdiction:** Since a property's mailing address (e.g., *Post Office Community*) is not always the same as jurisdiction, enter the correct information for each structure.
2. **SOURCE OF DAMAGE** indicates whether the damage was the result of flood, fire, wind, etc. or a combination of sources. Use the DEPTH-DAMAGE FIELD ESTIMATE worksheet for flood-related damages.
3. **DATE OF INITIAL FIRM** refers to the community's Flood Insurance Rate Map (FIRM). The initial date indicates when the flood area was first identified by FEMA. The SD determination process *does not apply* to structures built after this initial date. Check with the local floodplain administrator.
4. **FIRM PANEL:** Some communities have multiple panels. The panel number is found below the map title.
5. The **Depth in feet to Lowest Adjacent Grade (LAG)** refers to the level of the floodwater (i.e., The table uses -8 feet as the basement floor level, so a depth of -6 feet results from 2 feet of floodwater in a basement).
6. Round depths to the nearest whole foot.
7. Property owners with structures that have damages in the 40% (shaded on table) should be asked for documentation of damage and repairs to ensure that the structure is not substantially damaged.
8. For a structure with a compliant **Enclosure Below Lowest Floor** (see Figure 4 below) use lowest floor instead of lowest adjacent grade to measure depth of flooding. Compliant enclosures must have openings.
9. Since currently, **Manufactured Homes** are not included in the USACE depth-damage tables, consider a floodwater depth of 1 foot above the lowest floor to indicate substantial damage.
10. Local Floodplain Official must give property owners **written notice** that their structure has been determined to be substantially damaged along with instructions to comply with local permit requirements.

For general questions regarding the National Flood Insurance Program and your community's participation, call the Floodplain Management Section of the Indiana DNR Division of Water at 317-232-4160 (toll free 877-928-3755).





**MINIMUM REQUIREMENTS FOR ELEVATING AN EXISTING RESIDENTIAL STRUCTURE OR OR RECONSTRUCTION OF A RESIDENTIAL STRUCTURE ON A PREVIOUSLY OCCUPIED LOT**

State Form Number Pending

For Division of Water use: File # EA- \_\_\_\_\_

This worksheet is appropriate to use to demonstrate that the project will satisfy the minimum requirements for elevating an existing residential structure or reconstructing a residential structure on a previously occupied lot in a Special Flood Hazard Area (SFHA). This worksheet should not be used for 1) non-residential structures, 2) additions that extend beyond the existing footprint of the residence, 3) construction or reconstruction of a residence located in the floodplain of the Ohio River, or 4) placement of recreational vehicles.

**Plan Details and Supporting Documentation**

The following Minimum Plans Required must be submitted to the DNR Division of Water for review. The required items can be combined into one or more plan drawings provided that the information is clearly defined.

✓ item that are included in submittal	Minimum Plans Required
<input type="checkbox"/>	A site map with the lot clearly marked to scale. The location of the lot must be referenced to known landmarks such as road intersections, etc. Refer to <u>Example Diagram: Site Map</u> on Page 2.
<input type="checkbox"/>	A diagram showing that the proposed structure will be located in the area of the original foundation and footprint. If the structure will be relocated on the tract of land that is safer from flooding, provide the location of the new foundation. Refer to <u>Example Diagram: Elevations along all sides</u> on Page 2.
<input type="checkbox"/>	Provide the lowest adjacent natural grade elevations on all sides of the proposed residential structure. This must be certified by a licensed surveyor, architect, or engineer. Reference the elevation to a known datum (NAVD88 or NGVD29). Refer to <u>Example Diagram: Elevations along all sides</u> on Page 2.
<input type="checkbox"/>	A cross section plan view of the proposed residential structure that illustrates five elevations: (A) Base Flood Elevation (B) Lowest Interior Elevation (C) Lowest Exterior Elevation (D) Lowest Habitable Floor Elevation (E) Flood Protection Grade Elevation. <i>NOTE: Elevations must be tied into a known datum and benchmark referenced. For example, NAVD88 or NGVD29.</i>
<input type="checkbox"/>	Plans showing that all plumbing, electrical, heating, ventilation, and air conditioning equipment and other service facilities will be elevated or designed to prevent water from entering or accumulating within the components during conditions of flooding. Refer to FEMA P-348/February 2017 publication, <a href="http://www.fema.gov/media-library-data/1498005878535-dcc4b360f5c7eb7285eb7285acb2e206792312FEMA_P-348_508.pdf">www.fema.gov/media-library-data/1498005878535-dcc4b360f5c7eb7285eb7285acb2e206792312FEMA_P-348_508.pdf</a> .
<input type="checkbox"/>	Provide documentation that the proposed residential structure will be designed or modified and adequately anchored to prevent floatation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic load, including the effects of buoyance. Refer to FEMA Technical Bulletin 2, <a href="https://www.fema.gov/emergency-managers/risk-management/building-science/national-flood-insurance-technical-bulletins">https://www.fema.gov/emergency-managers/risk-management/building-science/national-flood-insurance-technical-bulletins</a>
<input type="checkbox"/>	If the residence is being reconstructed because the structure was damaged or destroyed, provide documentation with the date the structure incurred the damages (an insurance damage assessment or emergency response report, etc.)
<input type="checkbox"/>	Complete this worksheet by following the instructions. Be diligent to follow the special instructions after the Yes or No that you select as answers. Include the complete worksheet with the Minimum Plans Required listed above.

Example Diagram: Site Map



Example Diagram: Elevations along all sides



**Determining the Base Flood Elevation (BFE), Lowest Habitable Floor Elevation and the Flood Protection Grade (FPG)**

The Base Flood Elevation (BFE), the Flood Protection Grade (FPG), and lowest habitable floor are considered:

- 1) the Base Flood Elevation is the 1% annual chance flood (a flood elevation that has a 1% chance of being equaled to or exceeded in any given year). The Base Flood Elevation is also referred to as the 1% annual chance flood, Regulatory Flood Elevation (RFE), or the 100-year frequency flood elevation (100-year flood).
- 2) the Flood Protection Grade (FPG) elevation is set 2 feet above the Base Flood Elevation (BFE),
- 3) the lowest habitable floor is the bottom of an enclosed area located above Flood Protection Grade (FPG).

**Question 1 Base Flood Elevation:** The residence must be constructed so that the lowest habitable floor is at or above the Flood Protection Grade (FPG). To know the Flood Protection Grade Elevation, the Base Flood Elevation must be identified. Complete columns 1 and 2 in the chart below.

Column 1	Column 2
BFE at the upstream limit of the project site	Indicate the source of the BFE and the corresponding source file #, when applicable
BFE _____, ft.	Published Flood Insurance Study or a Flood Study Map _____
BFE _____ datum	Letter of Map Revision (LOMR) FEMA Case # _____
	DNR Floodplain Analysis and Regulatory Assessment (FARA) DNR FARA # _____
	Can be requested via <a href="http://INFIP.dnr.IN.gov">INFIP.dnr.IN.gov</a>

The five elevations that are required in this worksheet as noted in the chart below, have corresponding color-coding that is used in the diagrams throughout the worksheet.

**Question 2 Elevations:** Determine the five elevations of the proposed residence and record each elevation on the line under the appropriate column below. Proceed to Question 2a and follow the instructions with each Yes or No answer.

Elevation A = Base Flood	Elevation B = Lowest Interior Grade	Elevation C = Lowest Exterior Grade	Elevation D = Lowest Habitable Floor	Elevation E = Flood Protection Grade
_____ / _____ feet      datum	_____ / _____ feet      datum	_____ / _____ feet      datum	_____ / _____ feet      datum	_____ / _____ feet      datum

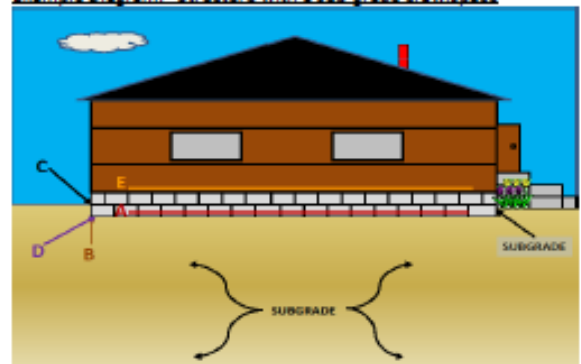
2a) Based on the elevations as recorded in the chart above, is Elevation C higher than Elevation A on all sides of the structure as illustrated in the Example Diagrams: Structure placed on natural ground, Structure with a sub-grade crawlspace, Structure with a sub-grade basement, and Structure with a walk-out basement below?

- Yes. When the Lowest Exterior Grade is higher than the Base Flood Elevation on all sides of the structure, as illustrated below in Example Diagrams: Structure placed on natural ground, Structure with a sub-grade crawlspace, Structure with a sub-grade basement, and Structure with a walk-out basement, the structure may not be in a floodplain if Elevations B and D are also above BFE for structures with sub-grade enclosures. No further questions on this worksheet are required to be completed. Sign and date the Statement of Affirmation on Page 8 and submit this worksheet along with the Minimum Plan Requirement from Page 1 for verification that the structure is not in a Special Flood Hazard Area.
- No. Proceed to Question 2b on Page 4.

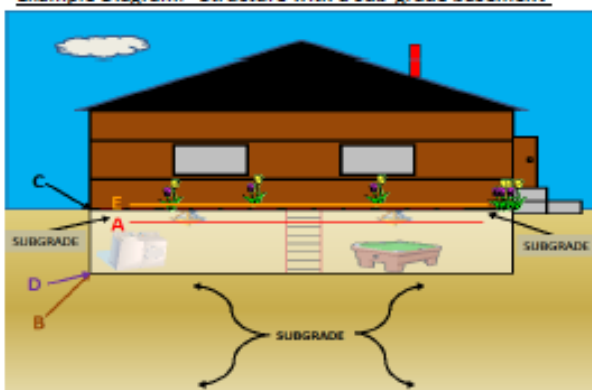
Example Diagram: Structure placed on natural ground



Example Diagram: Structure with a sub-grade crawlspace



Example Diagram: Structure with a sub-grade basement



Example Diagram: Structure with a walk-out basement



2b) Will fill material be used to elevate the structure so that Elevation C is higher than Elevation A on all sides of the structure as illustrated below in Example Diagram: Structure elevated entirely on fill?

- Yes. Fill placed in the floodway to elevate the residential structure will require a formal permit review by the DNR Division of Water. In addition, placing fill in a Special Flood Hazard Area may require authorization under the local floodplain ordinances. No further questions on this worksheet are required to be completed. Contact the DNR Division of Water and the local floodplain administrator for further instructions on the permitting requirements. Sign and date the Statement of Affirmation at the bottom of Page 8 and include this worksheet with the appropriate permit application documentation.
- No. Proceed to Question 2c

Example Diagram: Structure elevated entirely on fill



2c) Will the structure be elevated on posts or pilings and open on all sides below the Flood Protection Grade, see Example Diagram: Structure elevated above open-sided area, so that Elevation B equal to or higher than Elevation E?

- Yes. No further questions on this worksheet are required to be completed. Sign and date the Statement of Affirmation at the bottom of Page 8 and submit this worksheet along with the Minimum Plan Requirements from Page 1.
- No. An elevated structure with an enclosed area below the Flood Protection Grade with at least one side at or above the existing grade, require flood openings. Proceed to Elevated Structure with Enclosure Below the Flood Protection Grade and Flood Openings on Page 5.

Example Diagram: Structure elevated above open sided area

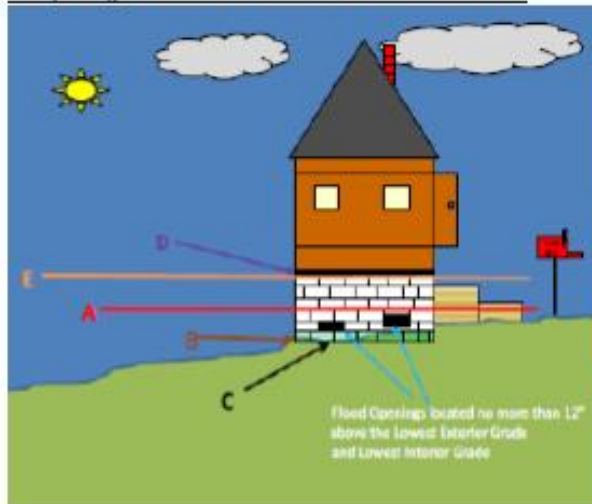


**Elevated Structure with Enclosure Below the Flood Protection Grade and Flood Openings**

An elevated structure with an enclosure below the Flood Protection Grade with at least one side at or above the existing grade requires flood openings as illustrated Example Diagram: Elevated Structure with Enclosure Below FPG. The flood opening areas are designed to allow for the entry and exit of floodwaters located below the Base Flood Elevation as illustrated in Example Diagram: Base Flood Elevation. The bottom of all flood openings must be no higher than 12" above the exterior grade unless the interior grade is higher; then, the bottom of the flood openings must be no more than 12" above the interior grade. Refer to the two Example Diagram: Exterior Grade and Example Diagram: Interior Grade.

Proceed to Page 6 for additional required plan documentation on flood openings.

Example Diagram: Elevated Structure with Enclosure Below FPG



Example Diagram: Base Flood Elevation

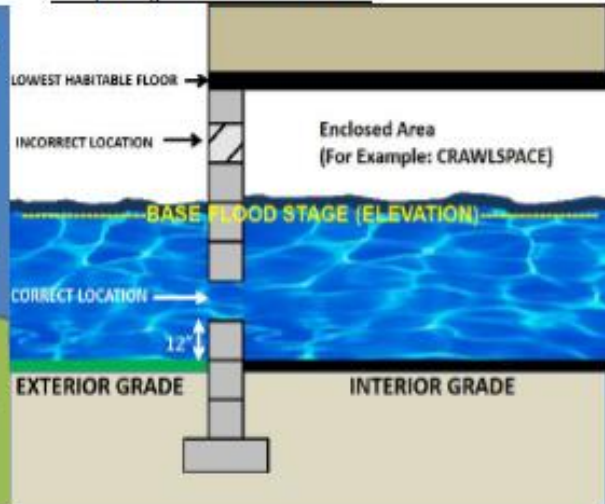


Diagram: Exterior Grade

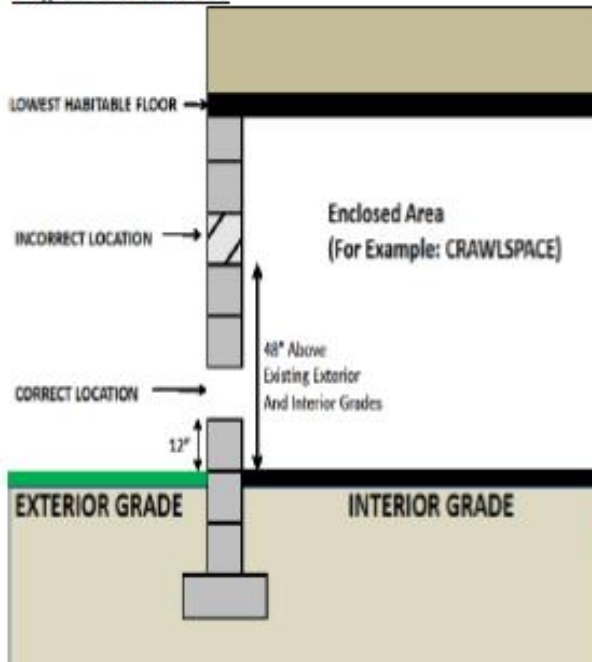
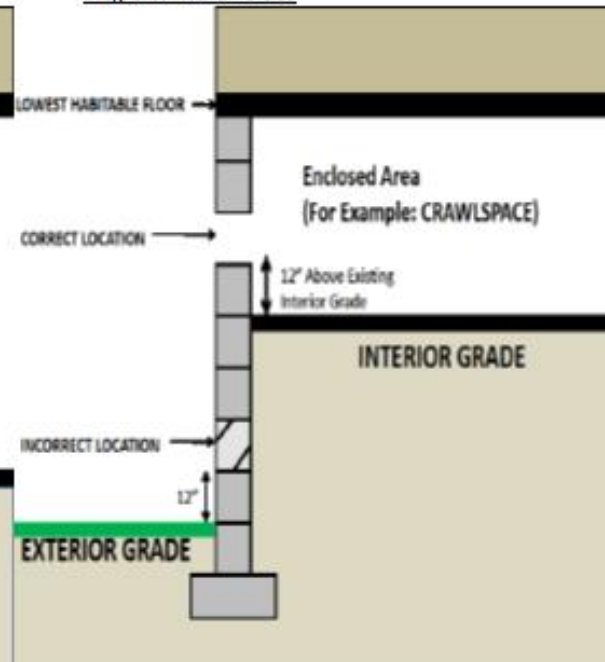


Diagram: Interior Grade

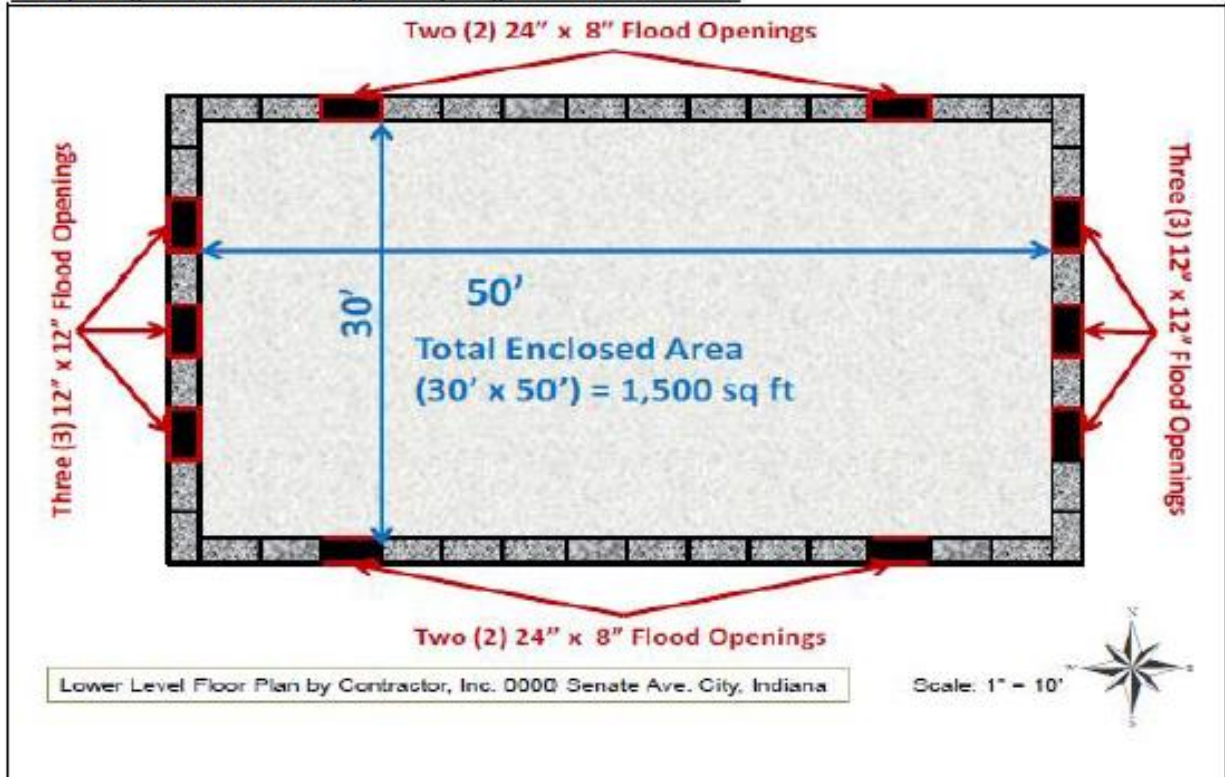




The following Additional Documentation must be submitted to illustrate that the structure has adequate flood openings. Proceed to Page 7 to answer Question 3 on Flood Opening Sizes

<b>Column 1</b> Check box <input type="checkbox"/> if item is included in submittal	<b>Column 3</b> Additional Documentation Required
<input type="checkbox"/>	Provide a plan view drawing which illustrates each of the following: (refer to the Example Diagrams: Plan View Showing Flood Openings and Total Enclosed Area and Flood Vents Location below) <ul style="list-style-type: none"> <li>• floor plan of the enclosed area(s) below the Base Flood Elevation,</li> <li>• total square feet of enclosed area, and</li> <li>• locations of the proposed flood openings as illustrated in <u>Example Diagram: Plan View of Flood Openings and Total Enclosed Area</u> or in FEMA Technical Bulletin 1.</li> </ul> <p>Note: A minimum of two flood openings are required.</p>
<input type="checkbox"/>	Provide a cross sectional illustration showing the height of the flood vents in relationship to the Base Flood Elevation and the adjacent exterior and interior grades, see <u>Example Diagram: Base Flood Elevation below</u> , <u>Example Diagram: Exterior Grade</u> , and <u>Example Diagram: Interior Grade</u> on Page 5.

Example Diagram: Plan View showing Flood Openings and Total Enclosed Area



To assist you in completing the Fillable Chart in Question 3, an Example Chart, below, is provided as a guide.

**Example Chart for Question 3**

<u>Column A</u> Dimensions of flood-opening area below the Base Flood Elevation	<u>Column B</u> Number of same size openings	<u>Column C</u> Flood-Opening Area in square inches (Column A value multiplied by Column B value)	<u>Column D</u> Total Enclosed Area (footprint area in square feet)
12" x 12"	6	864 square inches	<u>1,500 sq. ft</u>
24" x 8"	4	768 square inches	
		Total Flood-Opening Area = <u>1,632 sq. in.</u>	
<b>EQUATION: Column C <u>1,632 sq. in.</u> \ Column D <u>1,500 sq. ft</u> = Ratio <u>1.08</u></b>			

**Flood Opening Sizes**

The total area of all flood openings must equal or exceed 1 square inch of opening space per 1 square foot of enclosed area. Only areas of the flood opening that are positioned below the Base Flood Elevation shall be used to compute the Ratio in Question 3. Windows, doors, or manually operated vents are not considered flood openings and cannot be used for this computation.

**Question 3:** From your design plans, record the details of the flood openings in the Fillable Chart below:

**Fillable Chart**

<u>Column A</u> Dimensions of flood-opening area below the Base Flood Elevation	<u>Column B</u> Number of same size openings	<u>Column C</u> Flood-Opening Area in square inches (Column A value multiplied by Column B value)	<u>Column D</u> Total Enclosed Area (footprint area in square feet)
			_____ sq. ft.
		Total Flood-Opening Area = _____ sq. in.	
Divide the total value of Column C by the by the total of Column D and record the value next to "Ratio". <b>EQUATION: Column C _____ \ Column D _____ = Ratio _____ Proceed to Question 4.</b>			

**Question 4:** Is the resulting Ratio value computed in the Equation equal to or greater than 1?

- Yes. Proceed to Page 8 to sign and date the Statement of Affirmation and submit the worksheet along with the minimum plan requirements as shown on pages 1 and 6.
- No. The residential structure is not acceptable as designed. You must either increase the number of flood openings and/or the sizes of the flood openings so that the area in Column C is equal to or exceeds the Total of Column D. If your redesign is to increase the flood opening areas, recalculate the values in the Fillable Chart and reflect the changes on the design plans. If your vents are from a FEMA-approved vent manufacturer that demonstrates adequate opening area will be provided to withstand the pressure of hydrostatic loads against load bearing walls located below the Base Flood Elevation, submit a certification from either a licensed engineer, licensed architect, or the ICC-ES report.

By signing this document, I verify that the portion of the structure located below the Flood Protection Grade will be constructed with materials resistant to flood damage. (Refer to FEMA Technical Bulletin 2).

**AND**

By signing this document, I verify that the enclosed areas of the structure located below the Flood Protection Grade will not be converted into habitable living space.

I hereby swear or affirm, under the penalties for perjury, that the information submitted in this document is to the best of my knowledge and belief, true, accurate and complete.

\_\_\_\_\_  
Name of Preparer, Firm Name

\_\_\_\_\_  
Date

# Building Protection Requirements for Structures to be Reconstructed in the SFHA

## General Standards

- (1) Structures shall be anchored to prevent flotation, collapse or lateral movement of the structure;
- (2) Structures shall be constructed with materials and utility equipment resistant to flood damage below the FPG;
- (3) Structures shall be constructed by methods and practices that minimize flood damage;
- (4) Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; (refer to local ordinance as some communities require that all service utilities for residential structures be located at least to the FPG)

## Specific Standards

**Non-residential Construction.** Any commercial, industrial, or non-residential structure (or manufactured) that has incurred substantial damage shall have the lowest floor, including basement, elevated to or above the FPG (2 feet above the base flood elevation). Non-residential structures located in all “A Zones” may be floodproofed in lieu of being elevated if done in accordance with the following:

- (1) A Registered Professional Engineer or Architect shall certify that the structure has been designed so that below the FPG, the structure and attendant utility facilities are watertight and capable of resisting the effects of the regulatory flood. The structure design shall take into account flood velocities, duration, rate of rise, hydrostatic pressures, and impacts from debris or ice. Such certification shall be provided to the floodplain administrator.
- (2) Floodproofing measures shall be operable without human intervention and without an outside source of electricity.

**Residential Construction.** Any residential structure (or manufactured home) that has incurred substantial damage shall have the lowest floor, including basement, at or above the FPG (2 feet above the base flood elevation). Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with the Elevated Structures guidelines listed below.

**Elevated Structures.** A residential or non-residential structure that has been substantially damaged may be reconstructed by elevating at least to the flood protection grade (FPG) using pilings, piers, columns, posts, or foundation walls. Elevated structures constructed with fully enclosed areas formed by foundation and other exterior walls shall only be used solely for parking of vehicles, building access, or limited storage (i.e.

lawnmower) and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls. Designs for complying with this requirement must either be certified by a professional engineer or architect, or meet the following minimum criteria:

- (1) provide a minimum of two openings having a total net area of not less than 1 square inch for every 1 square foot of enclosed area; and
- (2) the bottom of all openings shall be no higher than 1 foot above foundation interior grade (which must be equal to in elevation or higher than the exterior foundation grade); and
- (3) openings may be equipped with screens, louvers, valves or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions.
- (4) access to the enclosed area shall be the minimum necessary to allow for parking for vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and
- (5) the interior portion of such enclosed area shall not be partitioned or finished into separate rooms; and
- (6) portions of the building below the flood protection grade must be constructed with materials resistant to flood damage.

**Structures Constructed on Fill.** A residential or non-residential structure may be reconstructed and elevated on a permanent land fill in accordance with the following:

- (1) The fill shall be placed in layers no greater than 1 foot deep before compacting to 95% of the maximum density obtainable with the Standard Proctor Test method.
- (2) The fill should extend at least 5 feet beyond the foundation of the structure before sloping below the FPG.
- (3) The fill shall be protected against erosion and scour during flooding by vegetative cover, riprap, or bulkheading. If vegetative cover is used, the slopes shall be no steeper than 3 horizontal to 1 vertical.
- (4) The fill shall not adversely affect the flow of surface drainage from or onto neighboring properties.
- (5) The top of the lowest floor, including basements, shall be at or above the FPG.

**Standards for Manufactured Homes.** In an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as a result of a flood, the following conditions apply:

- (1) The manufactured home shall be elevated on a permanent foundation such that the lowest floor shall be at or above the FPG and securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. This requirement applies to all manufactured homes to be placed on a site. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;

**Standards for Accessory Structures.** Within SFHA’s, repair or reconstruction of an accessory structure (400 square feet or less) must meet the following standards:

- (1) Use must be limited to parking of vehicles and limited storage.
- (2) Shall not be used for human habitation.
- (3) Shall be constructed of flood-resistant materials.
- (4) Shall be constructed and placed on the lot to offer the minimum resistance to the flow of floodwaters.
- (5) Shall be firmly anchored to prevent flotation.
- (6) Service facilities such as electrical and heating equipment shall be elevated or floodproofed to or above the FPG.
- (7) Shall be designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls as required for elevated structures.

**\* Please review your local floodplain ordinance to determine if more restrictive regulations have been adopted.**

## Post-Flood Procedure after Initial Depth-Damage Field Estimate

For structures that have been damaged, a determination of floodplain status (Floodway/ Floodway Fringe) needs to be made. If the Special Flood Hazard Areas (SFHA) does not have a delineated floodway, then a **Floodplain Analysis and Regulatory Assessment (FARA)** should be requested from DNR.

### **Low Damage (0 to 39 % Damaged)**

#### **Flood Fringe:**

- **Residential/ Non-Residential Structure:**
  - Structure non-substantially damaged, no building protection requirements apply<sup>1</sup>
  - Obtain local permit

#### **Floodway:**

- **Residential**
  - Structure non-substantially damaged, no building protection requirements apply provided the improvement when combined with any previous additions/improvements/repairs do not exceed 50%<sup>1</sup>
  - Obtain local permit
- **Non-residential**
  - Obtain a Construction in the Floodway Permit from DNR
  - After obtaining a DNR Floodway Permit, obtain local permit
  - No building protection requirements apply

### **Medium Damage (40 to 50 % Damaged)**

Compare the Structure's Pre-Damaged Value to the Cost of Repair

- If repair costs are less than 50%<sup>1</sup> of the value of the structure, then the structure is non-substantially damaged (**See Low Damage**)
- If repair costs equal or exceed 50%<sup>1</sup> of the value of the structure, then the structure is substantially damaged (**See High Damage**)

### **High Damage (51 to 100 % Damaged)**

Substantially Damaged structures must be brought into compliance with the local floodplain ordinance. For a list of Building Protection Requirements, see the document titled "**Building Protection Requirements that apply to Substantially Damaged Structures located in a SFHA in order for the Structures to be Reconstructed.**"\*\*

## **Flood Fringe:**

- **Residential Structures**
  - Structure substantially damaged
  - Obtain local permit and meet building protection requirements of the local floodplain ordinance
  - Submit elevation certificate to Floodplain Administrator
  
- **Non-residential structures**
  - Structure substantially damaged
  - Obtain local permit and meet building protection requirements of the local floodplain ordinance
  - Submit elevation certificate or floodproofing certificate to Floodplain Administrator

## **Floodway:**

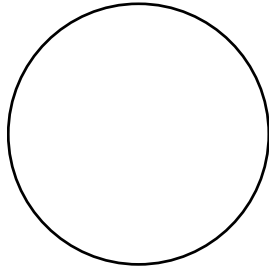
- **Residential Substantially Damaged Structures<sup>2</sup>**
  - Option 1: meet the requirements for plan review by Indiana Department of Natural Resources (DNR) that are listed on the checklist provided by DNR
    - After obtaining a plan review approval, obtain local permit and meet building protection requirements of the local floodplain ordinance
    - Submit elevation certificate to Floodplain Administrator
  
  - Option 2: Obtain a Construction in the Floodway Permit from DNR
    - After obtaining a DNR Floodway Permit, obtain local permit and meet building protection requirements of the local floodplain ordinance
    - Submit elevation certificate to Floodplain Administrator
  
- **Non-residential Substantially Damaged Structures**
  - Obtain a Construction in the Floodway Permit from DNR
  - After obtaining a DNR Floodway Permit, obtain local permit and meet building protection requirements of the local floodplain ordinance (either elevate to the FPG or dry floodproof to the FPG)
  - Submit elevation certificate or floodproofing certificate to Floodplain Administrator

<sup>1</sup> Please review your local floodplain ordinance to determine if more restrictive regulations have been adopted.

<sup>2</sup> Written approval (Construction in a Floodway permit) from DNR is required for repairs or reconstruction of a substantially damaged residential structure in the floodway of the Ohio River.



## Sample Door Tag Notice



### **NOTICE**

On \_\_\_\_\_, an initial damage assessment was completed for this structure as a result of the recent flood event.

(Community Name) requests that you contact our office as soon as possible to obtain a building permit for the storm related damage to your property. There is no cost for this permit

Office hours are 8:00 am to 5:00 pm  
Monday through Friday

---

(Community Name)  
Floodplain Administrator  
Address  
Phone Number

## Sample Damage Notice

This is to notify you that your structure has been identified as a possible damaged structure located in the floodplain due to the recent disaster. Under the authority of **(Local Floodplain Ordinance #)** \_\_\_\_\_ any reconstruction or repair activity on this structure will require a permit from the **(Local Building Permit Department)** \_\_\_\_\_. Failure to obtain the necessary permit will result in fines in accordance with provisions of the community's floodplain ordinance.

Please contact the **(Local Building Permit Department)** \_\_\_\_\_ to obtain the necessary permits prior to the start of any reconstruction activity. Thank you.

**(Local Permit Office)** \_\_\_\_\_

Phone (\_\_\_\_) \_\_\_\_ - \_\_\_\_\_

## Sample News Release

\_\_\_\_\_ **(Community Name)** residents reminded to get building permits for repairs to damaged structures.

Residents of \_\_\_\_\_ **(Community Name)** are reminded that with the recent disaster, many structures in the community may have experienced structural damage. Repairs and/or reconstruction activities to structures damaged due to the disaster that are located in the floodplain will require a local building permit from the \_\_\_\_\_ **(Name of local permit office)** as required by **(Community Name)** local floodplain ordinance. Failure to obtain the necessary permits can result in fines up to \_\_\_\_\_ **(dollar amount from local floodplain ordinance)**. In addition, depending on a property's location, a permit may be required from the Indiana Department of Natural Resources prior to the start of any reconstruction activity.

For more information on the permitting process, contact \_\_\_\_\_ **(local permit official)** at \_\_\_\_\_

## Sample Notice of Violation and Stop Work Order

This is to notify you that your structure, (type of structure) located at (address of structure) has been identified as substantially damaged as a result of recent flooding.

Under the authority of (Local Floodplain Ordinance #) any reconstruction activity for your structure would require a permit from the (Local Building Permit Department). If your structure is in the floodway portion of the floodplain, a review of plans and/or a permit will be required from the DNR Division of Water prior to issuance of a local permit.

A recent site inspection indicates that reconstruction work has been started on your structure. This constitutes a violation of (Local Floodplain Ordinance#), and you are now ordered to stop **all** work on the structure. Failure to comply with this stop-work order can result in fines begin placed against you and will place this matter into litigation.

Please contact me at (phone #) to set up a time to discuss this violation and how to proceed.

(Floodplain Administrator Name)

Floodplain Administrator

(Community Name)

# Sample Notice of Determination: Non-Substantial Damage

[Community]  
[Department]  
[Address Line 1]  
[Address Line 2]  
[City], [State] [Zip Code]  
[Phone Number]

[Date]  
No Substantial Damage

[Name]  
[Address Line 1]  
[Address Line 2]  
[City], [State] [Zip Code]

## NOTICE OF DETERMINATION

Dear [Name]:

As a result of a substantial damage determination, the [City/Town/County] has determined that your **structure received damages that were less than 50% of the pre-damage structure value** as the result of the flooding that occurred [Date] through [Date].

Under the requirements of the [Community] Floodplain Management Ordinance dated [Date], structures located within the 100-year floodplain that receive damages less than 50% of the structure value can be rebuilt on the original site, but must obtain a permit prior to making repairs.

Be advised that all repairs, reconstruction and new construction are subject to the provisions of the [City/Town/County] Building Code. The dimensions of the original footprint cannot increase or be altered without a permit. New construction must be evaluated in combination with any reconstruction or repairs to determine if the total value of the construction exceeds 50% of the structure value. Construction activities that occur without a proper permit are considered to be non-compliant and may result in daily fines and/or the removal of the non-compliant construction.

Members of our Department are prepared to meet with you at our office to discuss the substantial damage determination process and to provide guidance for reconstruction or repair of your structure. To schedule a meeting or discuss questions regarding this determination, please contact me or [Other Staff Member] at [Phone Number] between the hours of [Time] and [Time] , [Day] through [Day].

Sincerely,

[Title]  
[Department]

# Sample Notice of Determination: Substantial Damage

[Community]  
[Department]  
[Address Line 1]  
[Address Line 2]  
[City], [State] [Zip Code]  
[Phone Number]

[Date]  
Substantial Damage

[Name]  
[Address Line 1]  
[Address Line 2]  
[City], [State] [Zip Code]

## NOTICE OF DETERMINATION

Dear [Name]:

As a result of a substantial damage determination, the [City/Town/County] has determined that your **structure received damages exceeding 50% of the pre-damage structure value** as the result of the flooding that occurred [Date] through [Date].

Under the requirements of the [Community] Floodplain Management Ordinance dated [Date], structures located within the 100-year floodplain that receive damage of any origin, whereby the cost of restoring the structure would equal or exceed 50% of the structure value, must be brought into compliance with the Ordinance. For residential structures with more than 50% damage, the structures must either be removed from the floodplain or have the lowest floor (including basement) elevated 2 feet above the 100-year flood elevation. Failure to comply with this requirement will result in daily fines and/or legal action by the City against the owner of the structure.

Under the National Flood Insurance Program, the Increase Cost of Compliance (or ICC) program may provide additional financial assistance to either elevate or remove flood-damaged structures from the floodplain. ICC applies to flooded structures that are substantially damaged.

Be advised that all repairs, reconstruction and new construction are subject to the provisions of the [City/Town/County] Building Code and will require a permit. Construction activities that occur without a proper permit are considered to be non-compliant and may result in daily fines and/or the removal of the non-compliant construction.

Members of our Department are prepared to meet with you at our office to discuss the substantial damage determination process and to provide guidance for reconstruction or repair of your structure. To schedule a meeting or discuss questions regarding this determination, please contact me or [Other Staff Member] at [Phone Number] between the hours of [Time] and [Time] , [Day] through [Day].

Sincerely,

[Title]  
[Department]

# Sample Notice of Determination: Substantial Damage with Dollar Amounts

[Community]  
[Department]  
[Address Line 1]  
[Address Line 2]  
[City], [State] [Zip Code]  
[Phone Number]

[Date]  
Substantial Damage

[Name]  
[Address Line 1]  
[Address Line 2]  
[City], [State] [Zip Code]

## NOTICE OF DETERMINATION

Dear [Name]:

As a result of a substantial damage determination, the [City/Town/County] has determined that your **structure received damages exceeding 50% of the pre-damage structure value** as the result of the flooding that occurred [Date] through [Date].

Damage: [\$ Amount]

Market Value: [\$ Amount]

Flood Zone: [Zone]

Under the requirements of the [Community] Floodplain Management Ordinance dated [Date], structures located within the 100-year floodplain that receive damage of any origin, whereby the cost of restoring the structure would equal or exceed 50% of the structure value, must be brought into compliance with the Ordinance. For residential structures with more than 50% damage, the structures must either be removed from the floodplain or have the lowest floor (including basement) elevated 2 feet above the 100-year flood elevation. Failure to comply with this requirement will result in daily fines and/or legal action by the City against the owner of the structure.

Under the National Flood Insurance Program, the Increased Cost of Compliance (or ICC) program may provide additional financial assistance to either elevate or remove flood-damaged structures from the floodplain. ICC applies to flooded structures that are substantially damaged.

Be advised that all repairs, reconstruction and new construction are subject to the provisions of the [City/Town/County] Building Code and will require a permit. Construction activities that occur without a proper permit are considered to be non-compliant and may result in daily fines and/or the removal of the non-compliant construction.

Members of our Department are prepared to meet with you at our office to discuss the substantial damage determination process and to provide guidance for reconstruction or repair of your structure. To schedule a meeting or discuss questions regarding this determination, please contact me or [Other Staff Member] at [Phone Number] between the hours of [Time] and [Time], [Day] through [Day].

Sincerely,

[Title]  
[Department]

# Form: Request for Floodplain Analysis and Regulatory Assessment



## REQUEST FOR FLOODPLAIN ANALYSIS AND REGULATORY ASSESSMENT

State Form 50356 (R2 / 4-12)



**NOTE: This is Not an Application for a Permit.**

A Floodplain Analysis and Regulatory Assessment (FARA) provides floodplain information and the regulatory flood elevation (RFE) for a tract of land that is often needed for flood insurance purposes or for proposed construction projects. This form should be used for requests such as:

- Flood insurance determinations that are required by a mortgage lender.
- Supporting documentation for elevation certificates or Letter of Map Change requests.
- State permitting requirements for construction in a floodway (construction examples: building, fill, development, land re-grading, excavation, pond, fences, channel work, bank protection, dam, levee, stream crossing, bridge, culvert, etc).
- Elevation and permitting requirements for the construction or reconstruction of a house or placement of a manufactured home in a floodplain.

If you prefer to file your request electronically, you can submit the request through the e-FARA Wizard using the Indiana Floodplain Portal (INFIP) at [INFIP.dnr.in.gov](http://INFIP.dnr.in.gov)

**Step 1: Briefly explain the reason you are requesting floodplain or regulatory information**

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**Step 2: Requestor Information** *(Required Information, enter your information as the FARA requestor)*

Name \_\_\_\_\_ Name of Company \_\_\_\_\_

Mailing Address (number and street) \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP code \_\_\_\_\_

E-mail address \_\_\_\_\_ Daytime Telephone number \_\_\_\_\_

**Step 3: Property Owner Information** *(Required Information, if different from the Requestor Information)*

Name \_\_\_\_\_ Name of Company \_\_\_\_\_

Mailing Address (number and street) \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP code \_\_\_\_\_

E-mail address \_\_\_\_\_ Daytime Telephone number \_\_\_\_\_

**Step 4: Property Location and Description** *(Required Information)*

Physical Site Address \_\_\_\_\_

Nearest City/Town \_\_\_\_\_ County \_\_\_\_\_ Nearest Waterbody \_\_\_\_\_

Additional information about the property (for example: Lot or parcel #, parcel dimensions, tract location to street intersections)

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**Step 5: Provide site location** *(Required Information)*

An accurate site location must be submitted. Clearly mark the site or tract of land on a reference map. Examples of maps are: web maps, a USGS topographic map, a subdivision plat map, a property survey or legal description from mortgage survey.

**Send completed form and supporting information to:**

Department of Natural Resources, Division of Water  
402 West Washington Street, Room W264  
Indianapolis, IN 46204-2641  
E-mail address: [water\\_inquiry@dnr.IN.gov](mailto:water_inquiry@dnr.IN.gov)

**Contact Technical Services for questions:**

Telephone number: (317) 232-4160 Ext. 1  
Toll Free telephone number: (877) 928-3755 Ext. 1  
Fax number: (317) 233-4579  
Website: [www.in.gov/dnr/water](http://www.in.gov/dnr/water)