



North Carolina Department of Public Safety

Emergency Management

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

William C. Ray, Director

North Carolina Department of Public Safety National Flood Insurance Program Flood Damage Assessment Package

2022 Update



Includes Information On:
Pre-Disaster Steps to Take
Actions Following a Flood
High Water Mark Documentation
Substantial Damage Determinations
Sample Letters and Notices
Information on Mitigation Programs
Contact Information

Mailing Address:
4236 Mail Service Center
Raleigh, NC 27699-4236
www.ncdps.gov
www.ReadyNC.gov



An Equal Opportunity Employer

Office Location:
1636 Gold Star Drive
Raleigh, NC 27607
Phone: 919-825-2500
Fax: 919-825-2685

ABBREVIATIONS

BFE: Base Flood Elevation
FDPO: Flood Damage Prevention Ordinance (or Floodplain Ordinance)
FPA: The local municipality's Floodplain Administrator
FRIS: Flood Risk Information System (<http://fris.nc.gov/fris>)
NCEM: North Carolina Department of Public Safety Division of Emergency Management
NFIP: National Flood Insurance Program
RFPE: Regulatory Flood Protection Elevation (BFE plus freeboard)
SD: Substantial Damage
SFHA: Special Flood Hazard Area (or Regulatory Floodplain)
SI: Substantial Improvement

BEFORE THE FLOOD

A local floodplain administrator should have a clear idea of the number and locations of structures within the community that are in the Special Flood Hazard Area (SFHA). This will save time following a disaster by having already identified the structures within the community that will need a substantial damage assessment. Only those structures in the SFHA are required to have a substantial damage assessment.

SFHA shapefile boundaries are available for download from the North Carolina FRIS web site. By cross-referencing the SFHA with building footprints, all structures in the SFHA can be quickly identified. Work with your local GIS Department to create this list before the start of hurricane season.

IMPORTANT WEB SITES

- Flood.NC.gov
- [NC Flood Risk Information System \(FRIS\)](#)
- [NC Flood Inundation and Mapping Alert Network \(FIMAN\)](#)
- [NC Spatial Data Download](#)
- [NC High Water Mark Application](#)
- [NC Geodetic Survey](#)
- [FEMA Flood Map Service Center](#)
- [FEMA NFIP Floodsmart Website](#)
- [FEMA P-758: Substantial Improvement / Substantial Damage Desk Reference](#)
- [FEMA P-784: Substantial Damage Estimator Tool, Manual, and Field Workbook](#)
- [NOAA National Hurricane Center](#)

FOLLOWING A FLOOD

Flood Damage Prevention Ordinances in North Carolina require permits for the repair or reconstruction of flood damaged structures. The local manager must ensure that the repair of a damaged structure meets the FDPO requirements. Following a flood event, the local administrator should follow these five steps:

Step 1: Contact North Carolina Emergency Management or FEMA Region IV. Both offices have experience, materials, and guidance to help you carry out your floodplain management responsibilities. Make use of their help and expertise!

Step 2: Identify those structures believed to be substantially damaged and begin doing damage assessments.

As soon as possible, tour the flooded areas and identify every damaged structure in the SFHA.

Photograph the high-water mark and note the building's location on a map for future reference.

Tag each structure with the notice included in this packet so residents are aware of the post flood permit requirements. A sample press release is also included with this packet.

Damage assessments can be difficult. Local officials should inspect every flood damaged building and calculate the cost of repairs. The FEMA Damage Estimator available to help make these determinations. The pre-flood market value of every flooded structure can quickly be estimated from the County Assessor's records or by using square foot cost estimations.

Step 3: Provide information for the public on the local ordinance requirements for obtaining permits for repairs and rebuilding. Often repairs begin on flooded buildings before the water even recedes from the structure. Therefore, it is very important that this step take place as soon as possible. History shows that information normally spreads very fast among flood victims. Posted signs, flyers, notices on damaged structures, press releases, and letters mailed to individual owners can all be used for this purpose. Educate yourself on the damage assessment process, reconstruction methods, and available mitigation programs. Have a "Floodplain Development Permit Application" in hand and ready to distribute. Keep it simple. Be prepared for residents who are angry that they cannot start immediate repairs.

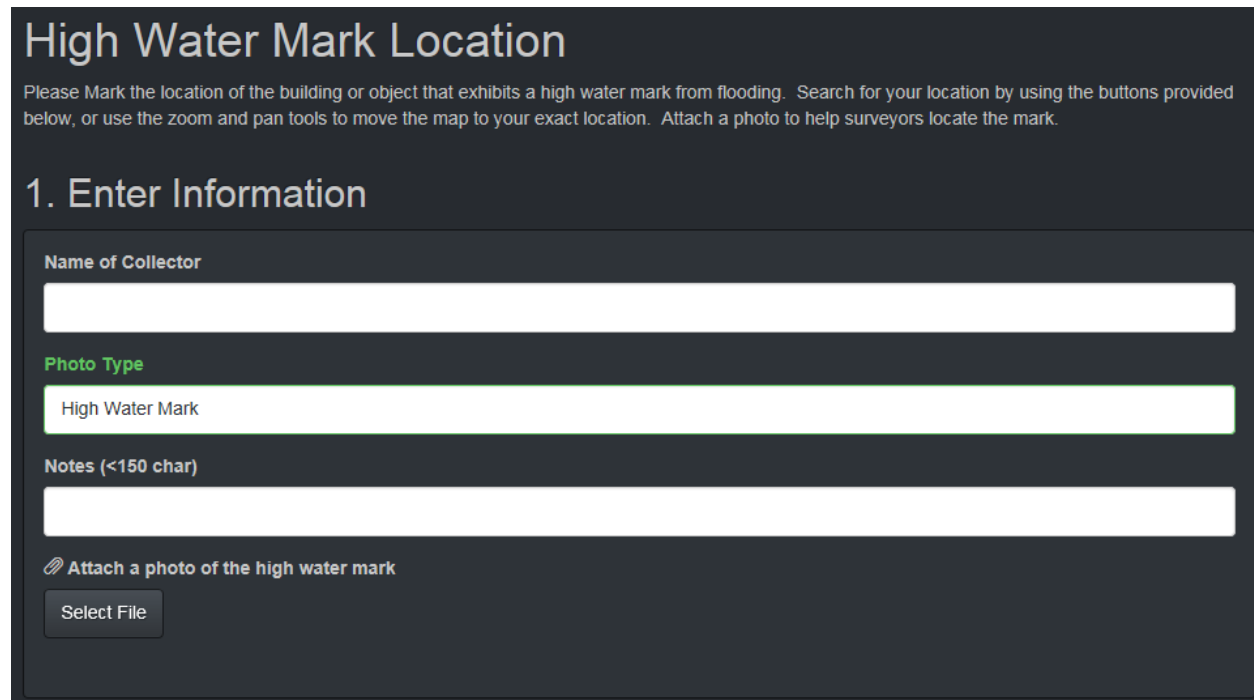
Step 4: Provide technical information to residents on elevation and floodproofing techniques. After a flood is the perfect window of opportunity to ensure that flood damages do not occur again. Federal or state mitigation programs are often available. Contact the County's Emergency Management Agency. They are familiar with the mitigation programs, and are in contact with the State Hazard Mitigation Officer. Technical manuals and guidance are also available. Public meetings can be presented in flooded communities to introduce flood victims to the various options available to them. NCEM can help with these meetings.

Step 5: Implement a permit application procedure. At this point the community should be on its way to enforcing the floodplain ordinance. Those structures identified as substantially damaged (more than 50% of the pre-flood market value) should be "red-tagged" or otherwise identified. These buildings must be brought fully into compliance with the local flood damage prevention ordinance. The repair plans and permits should reflect this. Buildings with less than 50% damage can be issued permits to repair. A community has the option of waving permit fees for a period of time following a flood, but the permitting process still must be followed.

HIGH WATER MARK APPLICATION

High water marks are the best resource for documenting a flood event. These marks can be used in a variety of mitigation and planning efforts. Posting high water mark signs in public places help keep the flood risk “front-of-mind” for the citizens of the community, emphasizing the risk of flooding and the need to protect their property through elevation, mitigation, and insurance.

North Carolina has created a web site to document high water mark locations. You do not have to be a surveyor or acquire the actual elevation to document a high water mark. Simply mark the location of the high water mark, enter the information and photos on the web site, and NC Geodetic Survey will survey the elevation and location of the high water mark.



The screenshot shows a web application interface for reporting high water marks. At the top, the title "High Water Mark Location" is displayed in a large, light-colored font. Below the title, a short instruction reads: "Please Mark the location of the building or object that exhibits a high water mark from flooding. Search for your location by using the buttons provided below, or use the zoom and pan tools to move the map to your exact location. Attach a photo to help surveyors locate the mark." The main section is titled "1. Enter Information" and contains several input fields: a "Name of Collector" field, a "Photo Type" dropdown menu with "High Water Mark" selected, a "Notes (<150 char)" text area, and an "Attach a photo of the high water mark" section with a "Select File" button.

Documentation:

- Type of mark (mud or seed line)
- Location (lat/long, near intersection)
- Flagging (tape, nail through a cap)
- Quality of the mark
- Landowner information
- Safety information
- Date-stamped digital photos

SUBSTANTIAL DAMAGE: THE 50% RULE

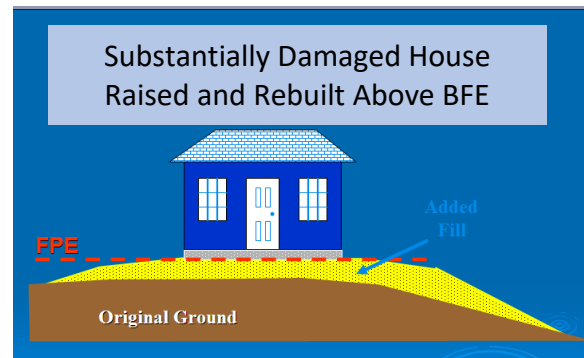
Communities participating in the National Flood Insurance Program (NFIP) have adopted, and are expected to enforce, a Flood Damage Prevention Ordinance. New structures located in a floodplain must be elevated above the RFPE. The same flood protection and elevation regulations also apply to substantially damaged buildings.

SUBSTANTIAL DAMAGE. Whenever a building located in an SFHA is damaged from any source (flood, fire, earthquake, wind, or man), the community must determine if that structure is substantially damaged. A building is substantially damaged when the cost of repairs are 50% or more of the structure's "pre-damaged" market value.

Manufactured homes can be substantially damaged with as little as one foot of flooding. Frame buildings typically take three 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, protected from future flooding to at least the base flood elevation).

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 and finish materials as well as labor.



CUMULATIVE COST. Some communities in North Carolina have adopted ordinances which track cumulative damages. Cumulative substantial damage occurs at the point where multiple damages or improvements total 50% of the original market value of the building over the time specified in the ordinance.

BUILDING VALUE. Building value is the market value of the structure only. Land and exterior improvements (pool, landscaping, walkways, etc.) are excluded.

Following a disaster most communities find it easiest and quickest to obtain the assessed value from the County Tax Assessor. This ensures a unified market value for everyone since they have been paying taxes on this figure. There is often an adjustment factor to be included to convert the Tax Assessed Value to the Market Value.

Other acceptable methods of estimating market value include:

Independent appraisals by a professional appraiser.

Detailed estimates of the structure's Actual Cash Value (replacement cost minus depreciation).

Property appraisals used for tax purposes.

The value of the building based on insurance claims.

Qualified estimates based on sound professional judgment made by staff of the local building department or local or state tax assessor's office.

DETERMINATION OF FLOOD DAMAGE. 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 and finish materials as well as labor. If local building codes require the structure to be repaired according to current codes these additional cost must be included in the full repair cost of the structure.

ITEMS TO BE INCLUDED IN DAMAGE DETERMINATIONS:

All structural elements:

- 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
- Reshingling or retiling a roof
- Hardware

All interior finish elements:

- 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:

- 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 (stoves, ovens, dishwashers, vents)
- Central vacuum systems
- Water filtration, conditioning, or recirculation systems
- Electrical panel boxes

Also:

Labor (calculated at county's posted prevailing wage), profit, and other costs associated with repairing building components. Even if the labor is from volunteers or performed by the owner, equivalent labor costs must be included.

ITEMS TO BE EXCLUDED FROM DAMAGE DETERMINATIONS:

- Clean-up and trash removal
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate and identify required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and recarpeting installed over finished flooring such as wood or tiling
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes
- Plug-in appliances such as washing machines, dryers, refrigerators, window air conditioners, dehumidifiers, portable space heaters, and microwave ovens

*Sample Letter of Introduction for SDE Inspections
City of Floodville*

*Department of Building Inspections
1212 River Road
Floodville, NC 27515*

September 31, 2018

Dear Structure Owner or Occupant:

The bearer of this letter is on official business for the *City of Floodville* during the hours between 8:00 AM and 6:00 PM, Monday through Saturday.

As a result of the flooding that occurred between *September 23 and 24, 2022*, City staff will be inspecting buildings throughout the community for evidence of Substantial Damage. This evaluation is required by our Flood Damage Prevention Ordinance dated *April 8, 2005*. These inspections apply to all structures within the Special Flood Hazard Area as shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM).

The inspectors will require approximately 30 minutes for a residential inspection and from 30 to 90 minutes for non-residential buildings to inspect for interior and exterior damage. They will record the required information used by the *Floodville Department of Building Inspections* for making Substantial Damage determinations. After the *City* has completed the determination process, a written determination will be mailed to the owners of the inspected structures.

Please be advised that all repairs, reconstruction, and new construction are subject to the provisions of the North Carolina Building Code and may require a permit. Construction activities conducted without a proper permit may be considered non-compliant and may result in daily fines and/or the removal of the non-compliant construction.

If you refuse admittance to the inspectors, your address will be provided to our *City* Attorney for processing of a formal legal request to inspect the structure during normal business hours.

Questions regarding the inspection process may be directed to me in the Department of Building Inspections at *919-555-1212* between the hours of 8:00 AM and 5:00 PM, Monday through Friday or e-mailed to Edward.teach@floodvillenc.gov.

*Edward Teach, Chief Inspector
Department of Building Inspections
919-555-1213*

SAMPLE HANDOUT FOR RESIDENTS

Information Regarding Cleanup of Damaged Structures within the Floodplain.

Repairs to damaged buildings located within the (community's name) floodplain require a permit from the (community) building department and/or the (community) Floodplain Administrator.

1. You MUST obtain a building permit from (community name) before you repair, alter, or replace any of the following items:

- | | |
|--------------|---------------------------|
| i. Roof | vii. Electrical systems |
| ii. Walls | viii. Plumbing |
| iii. Siding | ix. Heating |
| iv. Plaster | x. Air conditioning units |
| v. Cabinets | xi. Foundation |
| vi. Flooring | |

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:

- i. Removing and disposing of damaged contents, carpeting, wallboard, and insulation.
- ii. Hosing and scrubbing, or cleaning floors, walls, and ductwork.
- iii. Covering holes in roofs or walls and covering windows to prevent the weather from inflicting further damage.
- iv. 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.

BUILDING REPAIRS AND STRUCTURAL IMPROVEMENTS ARE NOT ALLOWED WITHOUT A PERMIT FROM THE LOCAL BUILDING DEPARTMENT**Recommended Guidelines for Interaction with Structure Owners by SDE Inspectors**

1. The objectives of the SDE inspections are to accurately collect the data required for the Substantial Damage determinations through rapid visual inspections and then move on to the next structure. The initial inspections may require more than 30 minutes for a residential structure. After the first five or so residential inspections, the inspection time should be 15 minutes or less, as the inspectors gain experience and feel more comfortable with the inspections.
2. Remember that you are entering someone's home, structure, or place of business on official City business. Therefore, conduct yourself in a professional manner and be respectful of personal property. Many of these owners and occupants have suffered significant financial losses.
3. The inspections should be conducted between the hours of ____ AM and ____ PM, Monday through Friday (Monday through Saturday), until all required structures have been inspected. This is in accordance with the inspection guidance provided in the community Letter of Introduction that you will be carrying during the inspection period.
4. Due to the extensive damage, many of the homes and buildings may be unoccupied. Our community legal counsel has determined that we can enter open, unoccupied structures. The structure must be unlocked and open, without any signs or other visible postings forbidding trespassing on the property or within the structure. Therefore, you may have little or no contact with many of the occupants as you complete the inspections.
5. When approached by a property owner or occupant, verify that the building being inspected is theirs and then hand them a community Letter of Introduction. In general, property owners and occupants will be curious and possibly suspicious of the inspections. Explain that you are only there to inspect for damage and record the required data. The Letter of Introduction should be handed out to anyone who requests information about the inspections, including the "why" and under "what authority."
6. If you feel threatened in any manner, return to your vehicle and call the police and then the SDE Manager with the address and type of threat.
7. Property owners and occupants with additional questions should call the point-of-contact identified in the Letter of Introduction. Try to avoid lengthy conversations as much as possible. Many of the conversations will become repetitive and will unnecessarily slow down the rate of inspections.

8. Unless specifically directed by the SDE Manager, do not try to explain the Substantial Damage determination process, what the results might mean for the property owner, or any State or Federal buyout or other post-disaster grant or funding program.
9. Under the SDE Manager's direction, explain that building permits may be required for any reconstruction, repairs, or new construction in the aftermath of the disaster. Also, any reconstruction, repairs, or new construction conducted without a proper permit may be considered non-compliant construction and could result in daily fines and/or removal of the non-compliant construction.
10. For locked properties or properties where the owner or occupant is present and refuses to allow you inside, simply record the address, a name and telephone number (if available), the reason for no entry, and then hand the owner or occupant a Letter of Introduction before moving on to the next structure.
11. Before entering a building, verify that the floor is safe to walk on, and then enter carefully. Refrain from pulling pieces of plaster, tearing out drywall or ceilings, or tearing back wallpaper or drywall unless absolutely necessary for the assessment of the damages on the percent breakdown section of the *Damage Inspection Worksheet*.

DAMAGE ESTIMATES BASED ON FLOOD DEPTH ON RESIDENTIAL BUILDINGS

The information compiled below can be used to quickly determine whether a residential structure in average condition is likely substantially damaged. 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 or her property. Often a more detailed assessment is warranted and detailed damage percentages should be determined, especially if the estimated damage is between 35% and 65% or if the house is in above or below average condition.

Depth Above First Finished Floor	Estimated Percent Damage (Residential, Average Condition)								
	0 feet	1 foot	2 feet	3 feet	4 feet	5 feet	6 feet	7 feet	8 feet
Residential, 1-Story, Slab-On-Grade or Crawlspace	18%	31%	42%	53%	62%	70%	77%	83%	89%
Residential, 2-Story, Slab-On-Grade or Crawlspace	12%	20%	28%	35%	41%	48%	54%	59%	64%
Manufactured Home	11%	58%	83%	96%	99%	99%	99%	99%	99%
Residential, 1-Story, with Basement	34%	42%	51%	60%	69%	77%	85%	92%	98%
Residential, 2-Story, with Basement	24%	29%	36%	42%	49%	55%	62%	68%	74%

SAMPLE DAMAGE ASSESSMENT WORKSHEET (long hand version)

1. Address: _____

2. Owner: _____

Telephone Number _____

3. Occupant: _____

Telephone 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 _____

Existing Lowest Floor Elevation: _____ (if available)

6. Duration of Flooding: Days _____ Hours _____

7. High Water Mark:

A) Exterior Walls _____ ft.

B) Interior Walls _____ 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 _____

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/Electrical
1) Water depth _____ ft.
2) Damaged _____ (Repairable _____ Replaced _____)

Use corresponding numbers given below to answer C-F below:

- | | |
|-----------------------|--------------------------|
| 1. settlement/cracked | 2. partially missing |
| 3. sagging | 4. dislodged/destroyed |
| 5. submerged | 6. include all the above |
| 7. no damage | 8. other: describe |

C) Foundation _____
D) Exterior Walls _____
E) Interior Walls _____
F) Roof _____

11. Overall condition of structure:

A) Minor damage _____ B) Major Damage _____
C) Totally destroyed _____ D) Structure off foundation _____

12. Determination of Substantial Damage

$$\text{Percent Damage} = \frac{\text{Cost of Repair}}{\text{Value of Building}} = \underline{\hspace{2cm}}$$

In the event that the percent damage is equal to or greater than 50%, the building is substantially damaged.

- This building is substantially damaged and therefore must be elevated or floodproofed so that the lowest floor is protected at or above the elevation of the base flood.
- This building is not substantially damaged. This building can be repaired without having to be mitigated.
- This is a properly elevated structure and may be reconstructed at its existing elevation.

Reviewed by: _____ Date: _____

Approved by: _____ Date: _____

THE 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. This computer 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).

If your community has multiple structures which have been flooded, it is definitely worth your time to obtain the SDE and learn to use the program. It will save you much time and research. The SDE can be downloaded directly from the FEMA website or obtained by contact FEMA or IDNR/OWR. The most recent SDE is version 3.0.



SDE DAMAGE FIELD INSPECTION WORKSHEET
Single/Multi-Family Site Built Residences

- 1. Subdivision:** _____ Parcel # _____ Lot # _____
- 2. Elevation of lowest floor:** _____ Datum: _____
- 3. NFIP Community Name:** _____
- 4. Latitude:** _____ Longitude: _____
- 5. Owner's First Name:** _____ Last Name: _____
- 6. Building Address:** _____
 City: _____
 State: _____ Zip: _____ Phone #: _____
- 7. County:** _____
- 8. Mailing Address:** _____
 City: _____
 State: _____ Zip: _____ Phone #: _____
- 9. Date of Construction:** _____ Date Damage Occurred: _____
- 10. Cause Of Damage:** (A) Fire (B) Flood (C) Fire & Wind (D) Seismic (E) Wind
- 11. Duration of Flooding:** (A) _____ hours or (B) _____ days
- 12. Description Of Residential Site-Built Modular Structure:**
- (A) Quality of Construction:
 (1) Low ___ (2) Fair ___ (3) Average ___ (4) Good ___ (5) Very Good ___ (6) Excellent ___
- (B) 1-story ___ 1 ½-story ___ 2-story ___ More than 2 stories ___ 2-Story Bi-level ___ Split-level ___
- (C) Foundation (*check one*):
 Slab-on-grade ___ Basement ___ Crawl space ___ Piers ___ Footings ___
- (D) Overall Dimensions of building foot print: Size (L) _____ ft X (W) _____ ft
- (E) Walls (check one)
 (1) Wood Frame ___ (2) Masonry ___ (3) Concrete Walls ___
 (4) Exterior Finish (Type) _____
 (5) Interior Finish (Type) _____
- (F) Roof:

(1) Metal/Corrugated or ribbed: _____ (2) Composition Shingles: _____ (3) Other: _____

(G) Heating/Cooling:
(1) Forced Air _____ (2) Warm and Cooled _____ (3) Wall Furnace _____ (4) Heat Pump _____

(H) Flooring
Floor Covering (Type) _____

(I) Appliances (built-in only).
List _____

(J) Fireplace: Yes _____ No _____ Quantity _____

(K) Porch/Breezeways: Yes _____ No _____

(L) Garage: Attached Detached No. of cars: _____
Carport: Attached Detached No. of cars: _____

(M) Basement (*check one*): Finished _____ Unfinished _____

(N) Deck: Yes _____ No _____

13. Name of Inspector:

14. Date of Inspection: _____ **Time of Inspection:** _____

15. Phone Number of Inspector (*including area code*) _____

16. Description of Special Flood Hazard Area (SFHA):
NFIP Community I.D.# _____ FIRM Panel #: _____

FIRM Suffix: _____ Date of FIRM Panel: _____ FIRM Zone: _____

BFE (NGVD): _____

Regulatory Floodway: Yes _____ No _____ Potential _____

17. Flood Depth Above Lowest Floor
(A) Exterior Walls _____ ft (B) Interior Walls _____ ft

18. PERCENT OF DAMAGE FIELD ESTIMATE *(for single/multi-family site built homes)*

- _____ % Foundations
- _____ % Superstructure (Framing/Masonry)
- _____ % Roofing
- _____ % Insulation and Weather-stripping
- _____ % Exterior Finish
- _____ % Interior Finish (Plaster/Drywall)
- _____ % Doors, Windows, Shutters
- _____ % Lumber Finished
- _____ % Hardware
- _____ % Cabinets/Countertops
- _____ % Floor Covering
- _____ % Plumbing
- _____ % Electrical
- _____ % Built-in Appliances
- _____ % Heating/Cooling (HVAC)
- _____ % Painting

19. CONDITION OF STRUCTURE: *(Check one)*

- _____ (A) Inundation damage only
- _____ (B) Minor structural damage
- _____ (C) Major structural damage
- _____ (D) Partially Collapsed
- _____ (E) Structure Moved Off Foundation
- _____ (F) Totally Destroyed/Collapsed

20. DESCRIPTION OF DAMAGE: *(Answer yes or no)*

- (A) Plumbing: _____ (1) Exposed _____ (2) In need of repair _____
- (B) HVAC/Electrical: _ (1) Submerged ____ (2) Damaged ____ (3) Repair ____ (4) Replace _____

SAMPLE NOTICE TO POST ON STRUCTURES



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

Before occupying this building or doing any repair work you must call the *(town or county) Department of Zoning and Building Safety at (____) _____* to schedule an inspection.

Failure to obtain permits prior to reconstruction approval may result in a penalty.

Substantial Damage Sample Letter to Notify Structure Owner of Determination**NOTICE OF SUBSTANTIAL DAMAGE DETERMINATION**

Dear [name of structure owner]:

The *City of Floodville* has reviewed your recent application for a permit to repair [*describe proposed improvement/addition*] for the existing residential structure located at [*insert structure address*], *Floodville, NC 27515*. These repairs are required due to flood damage from the storms of *July 26-28, 2013*.

It has been determined that this structure is located within a mapped Special Flood Hazard Area on the Flood Insurance Rate Map (FIRM), Panel *0150*, with an effective date of *June 19, 2008*. As required by our Flood Damage Prevention Ordinance, we have determined that the proposed repairs constitute Substantial Damage for the structure. This determination is based on a comparison of the cost estimate of the proposed cost of repairs to the pre-damage market value of the structure (excluding land value). When the cost of repairs equals or exceeds 50 percent of the pre-damage market value of the structure, the damages are considered Substantial Damage.

As a result of this determination, you are required to bring the structure into compliance with the flood damage-resistant provisions of the *City regulations and/or code [cite pertinent sections]*.

Building Address / Location: _____
Fair Market Value: *\$123,456 (Based on 1.5 x assessed value)*
Total Damages: *\$98,765*
Percent Damage: *80%*
Ordinance Requirement: Mitigation (Elevation, Relocation, or Demolition)

We would be pleased to meet with you and your designated representative (architect/builder) to discuss the requirements and potential options for bringing the home into compliance. There are several aspects that must be addressed to achieve compliance. The most significant requirement is that the lowest floor, as defined in the regulations/code, must be elevated to or above the *base flood elevation (BFE) [or the elevation specified in the regulations/code]*. You may wish to contact your insurance agent to understand how raising the lowest floor higher than the minimum required elevation can reduce National Flood Insurance Program (NFIP) flood insurance premiums.

Please resubmit your permit application along with plans and specifications that incorporate compliance measures. Construction activities that are undertaken without a proper permit are violations and may result in citations, fines, or other legal action.

Sincerely,

*Edward Teach, Chief Inspector
Department of Building Inspections
Floodville, NC
919-555-1213*

Work Does NOT Constitute Repair of Substantial Damage
Sample Letter to Notify Property Owner of Determination

NOTICE OF DETERMINATION

Dear *[name of structure owner]*:

The *City of Floodville* has reviewed your recent application for a permit to repair *[describe proposed improvement/addition]* for the existing residential structure located at *[insert structure address]*, *Floodville, NC 27515*. These repairs are required due to flood damage from the storms of *July 26-28, 2013*.

It has been determined that this structure is located within a mapped Special Flood Hazard Area on the Flood Insurance Rate Map (FIRM), Panel *0150*, with an effective date of *June 19, 2008*. As required by our floodplain management regulations and/or building code, we have determined that the proposed repair work does not constitute Substantial Damage for this structure. This determination is based on a comparison of the cost estimate of the proposed cost of repairs to the pre-damage market value of the structure (excluding land value). When the cost of repairs equals or exceeds 50 percent of the pre-damage market value of the structure, the damage is considered Substantial Damage.

Please be advised that we may need to make another determination if you elect to perform work other than that described and defined in your current permit application. This could include additional renovations or upgrades or building an addition. Construction activities that are undertaken without a proper permit are violations of the City building code and may result in citations, fines, or other legal action.

Let me know if you have any questions on this matter.

Sincerely,

Edward Teach, Chief Inspector
Department of Building Inspections
Floodville, NC
919-555-1213

MITIGATION INFORMATION

The Federal Emergency Management Agency (FEMA) and state mitigation programs present a critical opportunity 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.

What is mitigation? Any sustained 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.

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) provides funding to state, local, tribal and territorial governments so they can develop hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities. When requested by an authorized representative, this grant funding is available after a presidentially declared disaster. Funding is available to implement projects in accordance with state, tribal, and local priorities.

Building Resilient Infrastructure and Communities

Building Resilient Infrastructure and Communities (BRIC) will support states, local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency.

Flood Mitigation Assistance

The Flood Mitigation Assistance (FMA) is a competitive grant program that provides funding to states, local communities, federally recognized tribes and territories. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program (NFIP).

Eligible Activities

- Property Acquisition and Structure Demolition or Relocation
- Structure Elevation
- Mitigation Reconstruction
- 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
- Nature-based solutions
- Soil Stabilization

- Wildfire Mitigation
- Post-Disaster Code Enforcement
- 5% Initiative Projects
- Mitigation Planning and Planning-Related Activities (HMGP Only)

Who is Eligible to Apply?

State and tribal governments are eligible applicants. North Carolina Emergency Management is the agency designated to serve as the Applicant for each mitigation program. All interested property owners should apply to NCEM through the local or county government or the local emergency manager. 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 the applicable state agency.

Eligibility Requirements

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

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

Hazard Mitigation Team Contacts

Steve McGugan, State Hazard Mitigation Officer, Steve.McGugan@ncdps.gov

Jason Pleasant, Development Supervisor, Jason.Pleasant@ncdps.gov

Kaine Riggan, Grants Development Specialist, Kaine.Riggan@ncdps.gov

Portia Baldwin, Grants Development Specialist, Portia.Baldwin@ncdps.gov

Jennifer Lewis, Grants Development Specialist, Jennifer.Lewis@ncdps.gov

FLOODPLAIN MAPPING, MANAGEMENT, AND INSURANCE CONTACTS

HAZARD MITIGATION

Steve McGugan, State Hazard Mitigation Officer/Assistant Director	Steve.McGugan@ncdps.gov	(919) 873-5843
Gary Thompson, PLS, Deputy Section Chief, HM Program Support	Gary.Thompson@ncdps.gov	(919) 948-7844

NC FLOODPLAIN MAPPING PROGRAM

	https://flood.nc.gov/ncflood/	
Tom Langan, PE, CFM, Engineering Supervisor	Tom.Langan@ncdps.gov	(919) 825-2328
Tom Tufts, NCFMP Program Manager	Thomas.Tufts@ncdps.gov	(919) 825-2345
Scott Gentry, PE, CFM, Engineer/LOMC Manager	Scott.Gentry@ncdps.gov	(919) 825-2318
Abhijit Patil, PhD, Engineer	Abhijit.Patil@ncdps.gov	(919) 825-2518
Jintao Wen, PhD, PE, NFIP Engineer	Jintao.Wen@ncdps.gov	(919) 825-2317
Ao Yi, PhD, PE, PMP, CFM, Engineer	Ao.Yi@ncdps.gov	(919) 825-2559
Milton Carpenter, Outreach Planner	Milton.Carpenter@ncdps.gov	(919) 825-2302
Stacey Fuller, CFM, Outreach Planner	Stacey.Fuller@ncdps.gov	(919) 825-2315

NC FLOOD INUNDATION AND MAPPING NETWORK

	https://flood.nc.gov/ncflood/floodwarning.html	
Derek Frohbieter, Flood Warning Management Engineer	Derek.Frohbieter@ncdps.gov	(919) 825-2322
Thomas (Jamie) Clark, Western Gauge Maintenance Technician	Thomas.Clark@ncdps.gov	(828) 490-5976
Kyle Whitford, Eastern Gauge Maintenance Technician	Kyle.Whitford@ncdps.gov	(919) 624-2355
Curt Johnson, FIMAN Technician/Remote Pilot	Curt.Johnson@ncdps.gov	(919) 948-7837

NC FLOODPLAIN MANAGEMENT

	https://flood.nc.gov/ncflood/ncfip.html	
Steve Garrett, CFM, State NFIP Coordinator	Steve.Garrett@ncdps.gov	(919) 825-2316
Matthew Stillwagon, PhD, NFIP Planner, Central Area	Matthew.Stillwagon@ncdps.gov	(919) 825-2289
Terry Foxx, CFM, NFIP Planner, Western Branch	Terry.Foxx@ncdps.gov	(828) 228-8526
Eryn Futral, AICP, CFM, CZO, NFIP Planner, Eastern Branch	Eryn.Futral@ncdps.gov	(919) 819-1734

NCEM APPLICATION DEVELOPMENT AND GIS UNIT (Administration Section)

Dan Madding, GISP, IT Manager for Applications	Daniel.Madding@ncdps.gov	(919) 825-2336
Casey Buddenbaum, GIS Analyst	Casey.Buddenbaum@ncdps.gov	(919) 825-2352
John Lay, GISP, CFM, GIS Analyst	John.Lay@ncdps.gov	(919) 825-2330
Kalpana (Ana) Bastakoti, GIS Analyst	Kalpana.Bastakoti@ncdps.gov	(919) 825-2569

FEMA REGION IV

Mitigation Division, 3005 Chamblee Tucker Road, Atlanta, GA 30341

	https://www.fema.gov/about/organization/region-4	
Valerie Anderson, Floodplain Management Specialist	valerie.anderson@fema.dhs.gov	(770) 220-5661
Dewana Davis, Regional Flood Insurance Liaison	dewana.davis@fema.dhs.gov	(770) 220-5420
Roy McClure, Community Rating System Specialist	roy.mcclure@fema.dhs.gov	(770) 220-8835
Jason Hunter, CFM, Chief, Floodplain Management & Insurance Branch	jason.hunter@fema.dhs.gov	(770) 220-5414
Kristen Martinenza, P.E., CFM, Chief, Risk Analysis Branch	kristen.martinenza@fema.dhs.gov	(770) 220-3174
David Clukie, ANFI, CFM, NFIP Regional Manager, Region IV	David.Clukie@associates.fema.dhs.gov	(770) 893-1480

NFIP CONSUMER & AGENT INFORMATION

	https://www.fema.gov/flood-insurance or http://www.floodsmart.gov	
NFIP Information and NFIP Agent Referral line		(888) 435-6637

COMMUNITY RATING SYSTEM

	https://www.fema.gov/flood-insurance/rules-legislation/community-rating-system	
David Holcomb, CFM, ISO/CRS Specialist	JHolcomb@iso.com	(803) 894-9836
Marlene Jacobs, CFM, ISO/CRS Specialist	marlene.jacobs@verisk.com	(503) 769-3210
Mike Bratcher, CFM, ISO/CRS Specialist	jbratcher@verisk.com	(910) 298-2303

FEMA MAP INFORMATION eXchange (FMIX)

FEMA Flood Map Service Center, P.O. Box 3617 Oakton, VA 22124-9617

	https://floodmaps.fema.gov/fhm/fmx_main.html	
Technical assistance, LOMA/LOMR requests	FEMA-FMIX@fema.dhs.gov	FAX (703) 212-4090
Flood Insurance Rate Maps and Flood Insurance Studies		https://msc.fema.gov/portal
Community Status Book – See Current Effective Map column for FIRM Index date		http://www.fema.gov/cis/NC.pdf

NFIP PUBLICATIONS & TECHNICAL BULLETINS

<http://www.fema.gov/flood-insurance-library>, <http://www.fema.gov/floodplain-management-publications> and <https://www.fema.gov/media-library/resources-documents/collection>