Model Substantial Damage Response Plan

September 2022

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Terminology

Abbreviations Update this list upon document completion

CAC	Community Assistance Contact
CAV	Community Assistance Visit
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GIS	Geographic Information System
Hazus	Hazards, United States
ICC	Increased Cost of Compliance
NFIP	National Flood Insurance Program
RLP	Repetitive Loss Property
SDE	Substantial Damage Estimator
SDRP	Substantial Damage Response Plan
SFHA	Special Flood Hazard Area
SID	Structure Inventory Database

Definitions Update this list upon document completion

100-Year Flood—The flood that has a 1 percent chance of being equaled or exceeded in any given year. Statistically, a flood of this magnitude occurs on average once every 100 years, but any given area may experience multiple such floods over a much shorter period of time.

Base Flood—Another term for the 100-year flood—the flood having a 1 percent chance of being equaled or exceeded in any given year. The base flood is used as a reference flood level to ensure that all properties subject to the National Flood Insurance Program are protected to the same degree against flooding.

Community Rating System—A voluntary program that provides flood insurance premium discounts to property owners in communities that exceed the minimum requirements of the National Flood Insurance Program and complete activities that reduce flood hazard risk.

Flood Insurance Rate Map (FIRM)—The official map on which the Federal Emergency Management Agency delineates special flood hazard area for a given location.

Floodplain—Any land area susceptible to being inundated by flood waters from any source. A Flood Insurance Rate Map identifies most, but not necessarily all, of a community's floodplain as the special flood hazard area.

Geographic Information System (GIS)—A computer software application that relates data regarding physical and other features on the earth to a database for mapping and analysis.

Hazard—A source of potential danger or adverse condition that could harm people and/or cause property damage.

Hazus—A GIS-based program used to support risk assessments. The Hazus software program assesses risk in a quantitative manner to estimate damage and losses associated with natural hazards. Hazus is FEMA's nationally applicable, standardized methodology and software program and contains modules for estimating potential losses from earthquakes, floods, wind hazards, and tsunamis.

Increased Cost of Compliance (ICC)—One of several resources for flood insurance policyholders who need additional help rebuilding after a flood. It provides up to $30,000 to help cover the cost of mitigation measures that will reduce flood risk. ICC coverage is a part of most standard flood insurance policies available under the National Flood Insurance Program.

Mitigation—A preventive action that can be taken in advance of an event that will reduce or eliminate risk to life or property.

Repetitive Loss Property (RLP)—Repetitive loss means that a building covered by flood insurance incurred flood-related damage two times over a period of 10 years, and that the cost of the repairs was, on the average, at least 25 percent of the market value of the building before the damage occurred each time.

Special Flood Hazard Area (SFHA)—An area having special flood, mudflow, or flood-related erosion hazards and shown on a Flood Hazard Boundary or a Flood Insurance Rate Map Zone A, AO, A1-30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-30, V1-V30, VE or V. The SFHA is the area where the National Flood Insurance Program's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Structure Inventory Database (SID)—A list of assets identified in a study region that could be lost when a disaster occurs, and community resources are at risk. Assets include people, buildings, transportation, and other valued community resources.

Substantial Damage—Damage of any origin for which the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Note: If your municipality/county has a higher standard for substantial damage, use that higher standard for this definition instead of the 50 percent threshold.

Substantial Damage Estimator Tool— Substantial Damage Estimator 3.0 (FEMA P-784 / Tool Version 3.0 / August 2017) is a tool developed by FEMA to assist state and local officials in estimating substantial damage for residential and non-residential structures per the National Flood Insurance Program requirements adopted by the communities. The tool assesses damage caused by flood, wind, wildfire, seismic and other events.

Note: When released, details for future versions of the Substantial Damage Estimator Tool should replace language for Substantial Damage Estimator 3.0

Substantial Improvement— Any reconstruction, rehabilitation, addition or other improvement to a structure, the total cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement.

Note: If your municipality/county has a higher standard for substantial improvement, note that higher standard for this definition instead of the 50 percent threshold.

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Introduction

A substantial damage response plan (SDRP) is a detailed plan for how a community will evaluate flood damage to buildings in special flood hazard areas (SFHAs) and address any buildings that have been substantially damaged. Substantial damage means damage whose repair would cost more than 50 percent of the market value of a building. The National Flood Insurance Program (NFIP) requires that communities participating in the program address substantial damage after a flood.

Note: If your municipality/county has a higher standard for substantial damage (lower percentage), note the standard in this introduction instead of the 50 percent threshold.

The identification of substantially damaged structures is important for two reasons:

- When the owners of properties in SFHAs repair substantially damaged structures, they are required to meet local flood-damage-prevention building requirements for structures in SFHAs.
- Owners of properties within the SFHA who have flood insurance through the NFIP are eligible for additional payments to make repairs to meet local flood damage prevention requirements if their structures have been determined to have been substantially damaged.

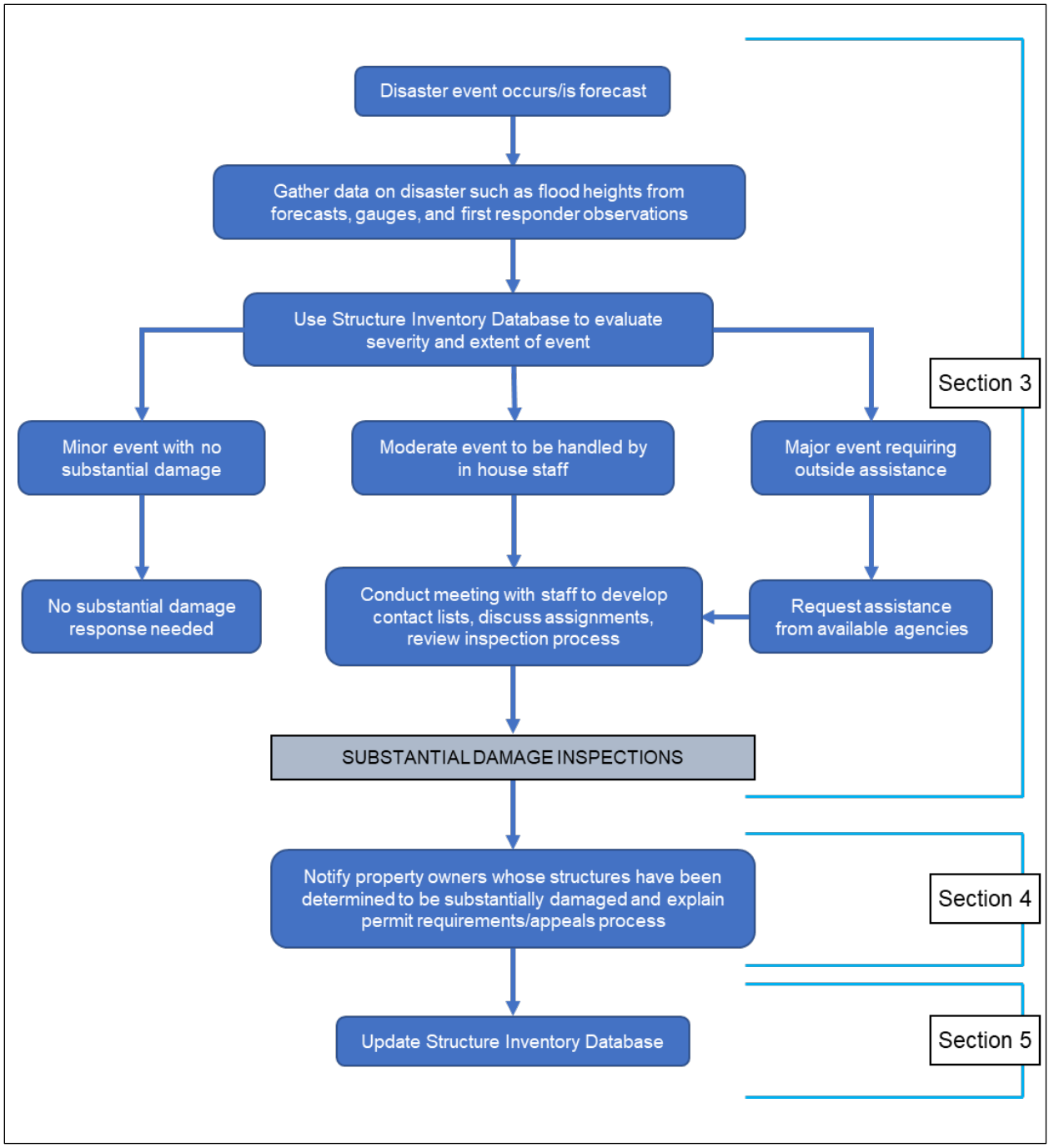
The [plan name] addresses the objectives of substantial damage response planning for [municipality or county name. **NOTE:** If this plan applies to only a portion of the community (such as, only the unincorporated areas of a county) then note that here]. It provides the following essential information:

- **Flood vulnerability**—Available data about local flooding and flood-prone buildings that can be used to evaluate the potential for damage to those buildings.
- **Community capabilities and responsibilities**—Community capabilities and responsibilities for substantial damage response and for ensuring that people who will be involved in these activities have the information and resources they need to act efficiently and cost-effectively.
- **Damage assessment procedures**—Procedures for conducting post-flood damage assessments and substantial damage determinations.
- **Post-determination response procedures**—Actions the community will take for building repairs and buildings determined to be substantially damaged, including consideration of suitable mitigation options to meet local flood damage prevention requirements.
- **Review and update process**—A process for reviewing the effectiveness of the SDRP after substantial-damage incidents and updating the plan as needed.

This SDRP focuses on damage associated with flooding, but its principles can be applied to substantial damage after any hazardous event, including fire, earthquake, or tornado. The NFIP requires a substantial evaluation and determination for "damage of any origin."

The NFIP does not require that a formal committee be established to prepare an SDRP or that the local government formally adopt the plan. However, the plan was developed with the participation of the community, the floodplain administrator, the building department, and any other local officials involved with the determining substantial damage.

The diagram below shows the essential components of the SDRP and indicates the section of this document in which each is described. Conversations or meetings with elected officials and appropriate staff will take place before finalizing any major decisions, such as requesting outside assistance.


Disaster event occurs/is forecast
Gather data on disaster such as flood heights from forecasts, gauges, and first responder observations
Use Structure Inventory Database to evaluate severity and extent of event
Minor event with no substantial damage
Moderate event to be handled by in house staff
Major event requiring outside assistance
No substantial damage response needed
Conduct meeting with staff to develop contact lists, discuss assignments, review inspection process
Request assistance from available agencies
SUBSTANTIAL DAMAGE INSPECTIONS
Notify property owners whose structures have been determined to be substantially damaged and explain permit requirements/appeals process
Update Structure Inventory Database
Section 3
Section 4
Section 5

1. Flood Vulnerability

1.1. Flooding in [municipality or county name]

1.1.1. TYPES OF FLOODING

In [municipality or county name], flooding generally takes one of the following forms:

Note: The following types of flooding are common in many communities. However, local conditions should dictate the types of flooding listed here and the details for each.

- **Flash Flooding**—Flash flooding can result from a large amount of rainfall over a short time span. A small amount of rain can also result in flash floods where the soil is frozen or saturated from a previous wet period, or if the rain is concentrated in an area of impervious surface such as a large parking lot, paved road, or other densely developed areas. Flash floods can be caused by a dam or levee break or by a mudslide. The intensity of rainfall, the location and distribution of the rainfall, the land use and topography, vegetation types and density, soil type, and soil water-content all determine how quickly flash flooding may occur and influence where it may occur. Include details on locations that are most at risk for flash flooding.

- **Coastal and Storm Surge Flooding**— Coastal flooding occurs when normally dry, low-lying land is flooded by seawater. The extent of coastal flooding is a function of the elevation inland flood waters penetrate which is controlled by the topography of the coastal land exposed to flooding. Storm surges occur when the water level of a tidally influenced body of water increases above the normal high tide. Storm surges occur with coastal storms caused by massive low-pressure systems with cyclonic flows that are typical of hurricanes. They can affect river systems and cause increased water elevations as the storm forces water inland. Storm surges are particularly damaging when they occur at the time of a high tide, combining the effects of the surge and the tide and reaching further inland than typical coastal flooding. [include description of coastal areas that are exposed to storm surge flooding in the municipality/county and extent of the floodplain. This can be done through review of storm surge mapping/SLOSH modeling]

- **Riverine Flooding**—Flooding along streams can result from slow-moving thunderstorms in a local area or heavy rains over a broad area associated with hurricanes and tropical storms. Heavy rainfall upstream can result in rising water levels in waterways that may overflow their banks and flood the surrounding floodplain. [include description of rivers/streams/creeks in the municipality/county and extent of the floodplain]

- **Flooding from Overtopping or Failure of Infrastructure**—Heavy rains can cause a dam or levee to fail, resulting in a sudden release of water that causes flooding. [include description of dams/levees in municipality/county and likely flood extents caused by overtopping or failure]

- **Urban Flooding**—In urbanized areas where much of the ground is covered by impervious surfaces, flooding can occur when development has obstructed the natural flow of water and

decreased the ability of natural groundcover to absorb and retain surface water runoff. Include details on locations that are most at risk for urban flooding.

- **Ice Jam Flooding**—An ice jam is an accumulation of ice in a river, stream or other flooding source that reduces the cross-sectional area available to carry the flow and increases the water-surface elevation. Ice usually accumulates at a natural or manmade obstruction or a relatively sudden change in slope, alignment or cross-section shape or depth. Ice jams often cause considerable increases in upstream water-surface elevation, and the flooding often occurs quite rapidly after the jam forms. Releases of an ice jam can also cause downstream flooding. Include details on locations that are most at risk for ice jam flooding.

1.1.2. FLOOD HISTORY

Table 1 summarizes the major flood history of [municipality/county name]. Estimated property damage from these events totaled [total property damages in $, note the time frame]—an average of [annualized damage in $] in damage per year.

Note: Historical flood data can be obtained from numerous sources including:

- NFIP data on claims/losses
- Federal disaster declarations
- NOAA's NCEI Storm Events Database
- USGS gauge records
- Documentation in plans/reports (recovery plans, hazard mitigation plans, etc.)

Table 1: Historical Flood Data for [municipality/county name]

Area Affected	Date	Deaths	Description of Event	Property Damage

1.1.3. NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION

[municipality/county name] entered regular participation in the National Flood Insurance Program (NFIP) on [date]. The currently effective Flood Insurance Rate Map (FIRM) for [municipality/county name] is dated [date].

Note: If applicable/available, include details on NFIP payouts, ICC claims, etc. for your municipality/county and use these details to frame a discussion of the repercussions of not addressing flood risk. It is recommended that a discussion of the benefits of NFIP participation be included.

1.1.4. [NAME OF MUNICIPAL/COUNTY FLOOD DAMAGE PREVENTION ORDINANCE]

[municipality/county name] adopted its [name of flood damage prevention ordinance] on [date] to minimize public and private flood-related losses in high-hazard areas. It was last amended on [date]. The [ordinance or order or other] establishes restrictions on land uses and activities that can result in increased risks to public health and safety from flooding.

Key elements of this [ordinance or order or other] include:

- [Discuss elevation requirements and what structures the requirements apply to]
- [Discuss any provisions related to repetitive and severe repetitive loss properties]

The [ordinance or order or other] defines “substantial damage” and” substantial improvement” as follows:

- **Substantial damage** means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

  Note: If your municipality/county has a higher standard for substantial damage (lower percentage), note the standard in this definition instead of the 50 percent threshold.

- **Substantial improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before start of construction of the improvement. This term includes structures which have incurred substantial damage, regardless of the actual repair work performed.

  Note: If your municipality/county has a higher standard for substantial improvement (lower percentage), note the standard in this definition instead of the 50 percent threshold.

The language of this [ordinance or order or other] is consistent with the minimum requirements for the NFIP specified under Title 44 of the Code of Federal Regulations (Section 59.1). The [municipality/county] has not adopted any higher standard that alters the definition (e.g., defining a

different damage threshold or counting cumulative damage from multiple events toward the threshold).

OR

The language of this [flood damage prevention type, i.e., ordinance, order] exceeds with the minimum requirements for the NFIP specified under Title 44 of the Code of Federal Regulations (Section 59.1). The [municipality/county] has adopted a higher standard that alters the definition. [describe higher standard (e.g., defining a different damage threshold or counting cumulative damage from multiple events toward the threshold)]

1.1.5. PREVIOUS FLOOD-RELATED PLANNING

[municipality/county name] is currently covered under the [name and date of hazard mitigation plan]. That plan analyzed flooding through [describe level/type of analysis used to analyze flooding in the hazard mitigation plan e.g., a historical analysis of past events, a statistical approach of risk including frequency of return, approximate annualized losses, a description of general vulnerability, and a statement of the hazard's impact]. [if applicable, note if the hazard mitigation plan is undergoing an update and anticipated adoption date]

Communities should add discussion of other flood-related planning that has taken place such as recovery plans, stormwater plans, etc.

1.2. Vulnerability Factors for Substantial Damage

The following sections describe factors that are used as a basis for identifying structures that are likely to be substantially damaged.

1.2.1. PRE- FIRM STRUCTURES IN THE SFHA

A structure that is habitable and located in the FEMA-designated SFHA (according to the effective [municipality/county name] FIRM) is potentially vulnerable if the structure was built before the date of the first FIRM (pre-FIRM structure). Such structures were built before floodplain management regulations outlined in the [name of flood damage prevention ordinance] took effect.

1.2.2. REPETITIVE LOSS PROPERTIES

A FEMA-identified repetitive loss property within the SFHA is likely to be vulnerable to substantial damage. Repetitive loss means that a building covered by flood insurance incurred flood-related damage two times over a period of 10 years, and that the cost of the repairs each time was, on the average, at least 25 percent of the market value of the building before the damage occurred. A flood insurance claim must have been paid in both cases. FEMA monitors and tracks these properties.

1.2.3. OUT-OF-COMPLIANCE STRUCTURES

Out-of-compliance structures are those that do not meet a community's floodplain damage prevention order. Properties may be out-of-compliance for several reasons, including structures that were:

- Built prior to the community's entry into the NFIP
- Built with lowest floor below the base flood elevation
- Built prior to the effective FIRM
- Declared substantially damaged in a past event and remain out-of-compliance with the community's substantial damage provisions
- Altered in ways that are not permittable under floodplain management regulations.

Out-of-compliance structures can be identified by the year built, by maintaining a list of properties that were determined to be substantially damaged in previous events, by examining the location of structures compared to previously effective FIRMs, and by identifying NFIP minus-rated flood insurance policies. NFIP minus-rated policies are those that are rated with the lowest floor 1 foot or more below the base flood elevation.

FEMA will require any non-compliant structure to be addressed, these structures should not be allowed to further become non-compliant. Following major hazard events that result in significant damage in the SFHA, FEMA or state NFIP coordinating agencies typically conduct NFIP compliance audits referred to as Community Assistance Visits or Community Assistance Contacts. The purpose of these audits is to ensure that communities likely to receive federal funding under the Robert T. Stafford Act are in compliance with the act's prerequisites for eligibility.

1.2.4. STRUCTURES THAT TRIGGER DEPTH/DAMAGE CORRELATION THRESHOLD

A structure in the SFHA may be vulnerable to substantial damage if modeling using the U.S. Army Corps of Engineers' depth-damage curves indicates that modeled flood depths would result in 40 percent damage to the structure. Depth-damage curves correlate typical structure damage to the depth of floodwater a structure experiences. Because there is a margin of error associated with depth-damage curve estimates, 40 percent, rather than the local substantial damage threshold of [xx] percent, provides a conservative estimate of potentially substantially damaged structures. An example depth-damage curve is shown in Figure 1.

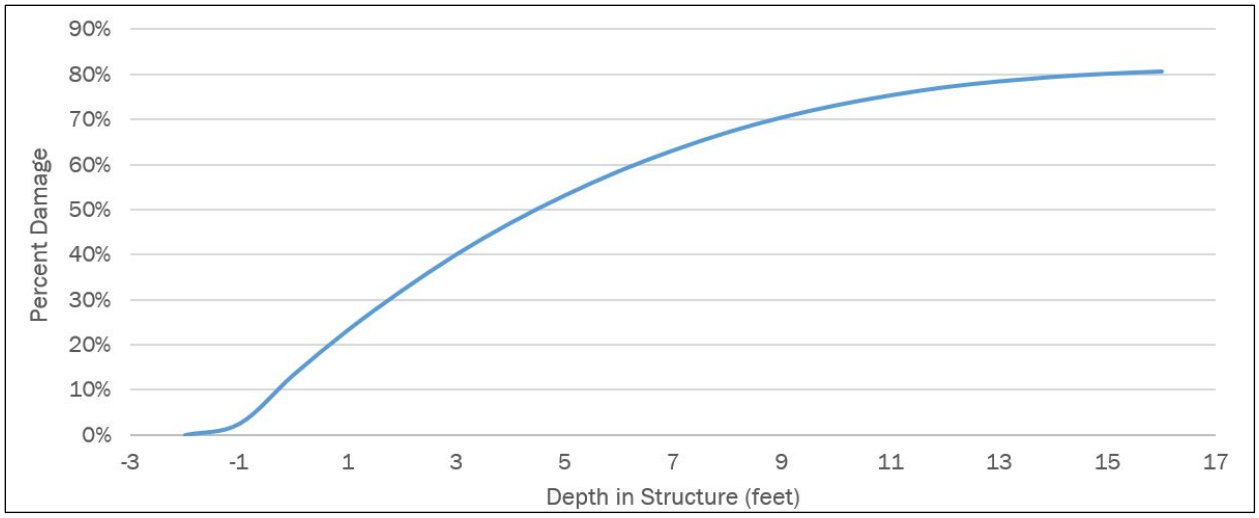


Figure 1. Generic Depth-Damage Curve for One Story Structure with No Basement (USACE 2000)

1.3. Existing Inventory of Vulnerable Structures

1.3.1. INVENTORY OVERVIEW

The Structure Inventory Database (SID) of [municipality/county name] structures with potential to be substantially damaged by flooding was created for this SDRP, based on the vulnerability factors described above. The SID provides a list of properties that are likely to require substantial damage determinations following a flood event.

[Explain how the inventory was created and what data sources were used. Examples of data sources include:

- Flood insurance data
- Structure foundation type and construction date information provided in assessor records
- Structure elevation information taken from elevation certificates on file]

The complete inventory is provided [Note where inventory is located. This could be attached to this plan or in a separate location]. It includes [number of properties in SID] properties, as summarized in Table 2. A map of the identified properties is provided in Appendix A [Note where mapping is located. This could be attached to this plan as an appendix or in a separate location].

Table 2: SDRP Inventory Summary

Number of Structures Inventoried	
Residential	XXX
Non-Residential	XXX
Total	XXX
Value	
Total for All Structures Inventoried	
Structure	XXX
Contents	XXX
Average per Structure	
Structure	XXX
Contents	XXX

1.3.2. PROPERTIES BY VULNERABILITY FACTOR

Pre-FIRM Structures in the SFHA

The SID identifies [number of pre-FIRM structure] structures in the SFHA that were constructed before the effective date of the [municipality/county]'s first FIRM. Of these, [number of pre-FIRM residential structures] are residential.

Repetitive Loss Properties

[Explain how the municipality or county name received/developed the current list of RLPs in the planning area]. The repetitive loss statistics for the [municipality/county name] are shown in Table 3. The RLPs and addresses are matched in the SID and repetitive loss attributes populated, as appropriate. RLPs in the SFHA are included in SID and identified as properties likely to be substantially damaged. RLPs outside the SFHA or those with addresses unable to be matched to structures within the SID are not included in this assessment.

Table 3: Repetitive Loss Statistics

Total # of RLPs	
Total # of Severe RLPs	
Total Cumulative Claims Paid to RLPs	
Average Claim Paid to RLPs	
# of RLPs That Have Been Mitigated	
# of RLPs That Are Post-FIRM	
Total # of RLPs in SID	

Statistics as of [date of flood insurance data]
Total # of RLPs includes Severe RLPs

Out-of-Compliance Structures

The SID identifies structures that may potentially be out-of-compliance based on structure attributes collected during the SID development.

Note: If your community has minus-rated properties, NFIP-violation structures, or other noted NFIP compliance issues that have been identified internally or by a Community Assistance Visit, describe the process that resulted in the identification of compliance issues, the date when the issues were identified, the number of properties, and any underway efforts to mitigate the identified properties.

Structures with Low Elevations

[Discuss if/how surveyed finished floor elevations were included in the SID]

Note: information on minus-rated polices could be used to identify structures that are known to have low elevations if information is available. If this information is available, it should be included in the SID. The SDRP should note the number of structures in the SFHA that are minus-rated policies and how many are residential.

[Discuss if/how foundation type and finished floor height information were included in the SID]. **Table 4** provides a summary of the structures within [municipality/county name] assumed to have each foundation type. Note: **Table 4** should be modified to apply to the foundation types specific to the municipality/county.

Table 4: Summary of SID Foundation Types

Foundation Type	# Determined from Elevation Certificates	# Determined from Assessor Data	# Using Default Type	Total # Structures
Slab-on-Grade	_____	_____	_____	_____
Chainwall/Stemwall	_____	_____	_____	_____
Pier, Post' or Pile	_____	_____	_____	_____

Note: If elevation certificates are used to establish first floor heights, the SID should also establish how default first floor heights are established for structures without elevation certificates. An example is listed below.

For the structures without elevation certificates, default first floor heights were determined for the various foundation types. The average of the first floor height values, listed on the elevation certificates, for each foundation type was calculated and used as the basis for the default values. **Table 5** lists the default first floor heights used for the SID.

Table 5: Finished Floor Height Default Values

Foundation Type	Finished Floor Height above Adjacent Grade (feet)
Slab on Grade, Not Post-FIRM Structure	___
Slab on Grade, Post-FIRM Structure	___
Chainwall/Stemwall (Foundation type used in County assessor data)	___
Pier, Post or Pile	___

Structures Built Prior to the Effective FIRM

The SID identifies [number of structures] structures in the SFHA that were built after the community entered the NFIP, but prior to the effective FIRM. Of these, [number of structures] are residential. These structures could be out-of-compliance due to changes in FIRMs that occur over time.

In [municipality/county name], an estimated [number of structures] structures were added to the SFHA with the adoption of the [effective year] FIRM. All these structures were built prior to the effective FIRM, although some may have been constructed to current standards due to advisory guidance from the [municipality/county name] floodplain administrator.

Previously Declared Substantially Damaged Structures

[Discuss data on structures in the SFHA previously declared as substantially damaged]. As structures are declared substantially damaged in the future, they will continue to be tagged by the [municipality/county name] floodplain administrator in the SID.

OR

Data on structures in the SFHA previously declared as substantially damaged was not available for the SDRP. As structures are declared substantially damaged in the future, they can be tagged by the [municipality/county name] floodplain administrator in the SID.

Unpermitted Altered Structures

All remaining structures in the SFHA could potentially be out-of-compliance if any non-permitted improvements were made.

[Discuss data on structures that are unpermitted altered structures].

OR

However, information to identify these structures is not available without detailed inspections.

Properties That Trigger Depth/Damage Correlation Threshold

The SID identifies both flood depth in structure and outside of structure for each structure likely to meet or exceed 40 percent damage. The thresholds used for the depth in structure to reach 40 percent damage is provided in Table 6. The depth outside of structure to reach 40 percent damage was determined by adding the finished floor height to the depth in structure.

NOTE: **Table 6** will need to be updated based on the USACE data available for the community/county.

Table 6: Depth in Structure to Reach 40% Damage by Structure Type

Hazus Occupancy Class	Flood Depth in Structure for 40% Damage (in feet)	Source Damage Curve
RES1 (1-story with basement)		
RES1 (2-stories with basement)		
RES1 (1-story without basement)		
RES1 (2-stories without basement)		
RES2		
RES3 (1-story)		
RES3 (2-stories)		
RES4		
RES5		

Hazus Occupancy Class	Flood Depth in Structure for 40% Damage (in feet)	Source Damage Curve
RES6		
COM1		
COM2		
COM3		
COM4		
COM5		
COM6		
COM7		
COM8		
COM9		
COM10		
IND1		
IND2		
IND3		
IND4		
IND5		
IND6		
AGR1		
REL1		
GOV1		
GOV2		
EDU1		
EDU2		

[Provide an analysis of the number of structures in the community identified as likely to experience 40% damage at varying levels of outside flood depth. The text and figure below provide one example of what such an analysis might look like].

EXAMPLE TEXT AND FIGURE ONLY:

Figure 2 shows the total number of structures in unincorporated areas of the county that are likely to meet or exceed 40 percent damage with incremental increases in flood depth. Only about 2 percent of the structures unincorporated areas are likely to be substantially damaged if they experience 3 feet of flooding or less as measured outside of the structure. An additional 65 percent are likely to be substantially damaged as flood depth rises from 3 feet to 5 feet. About 30 percent of structures in the County are unlikely to be substantially damaged until outside flood depth exceeds 7 feet.

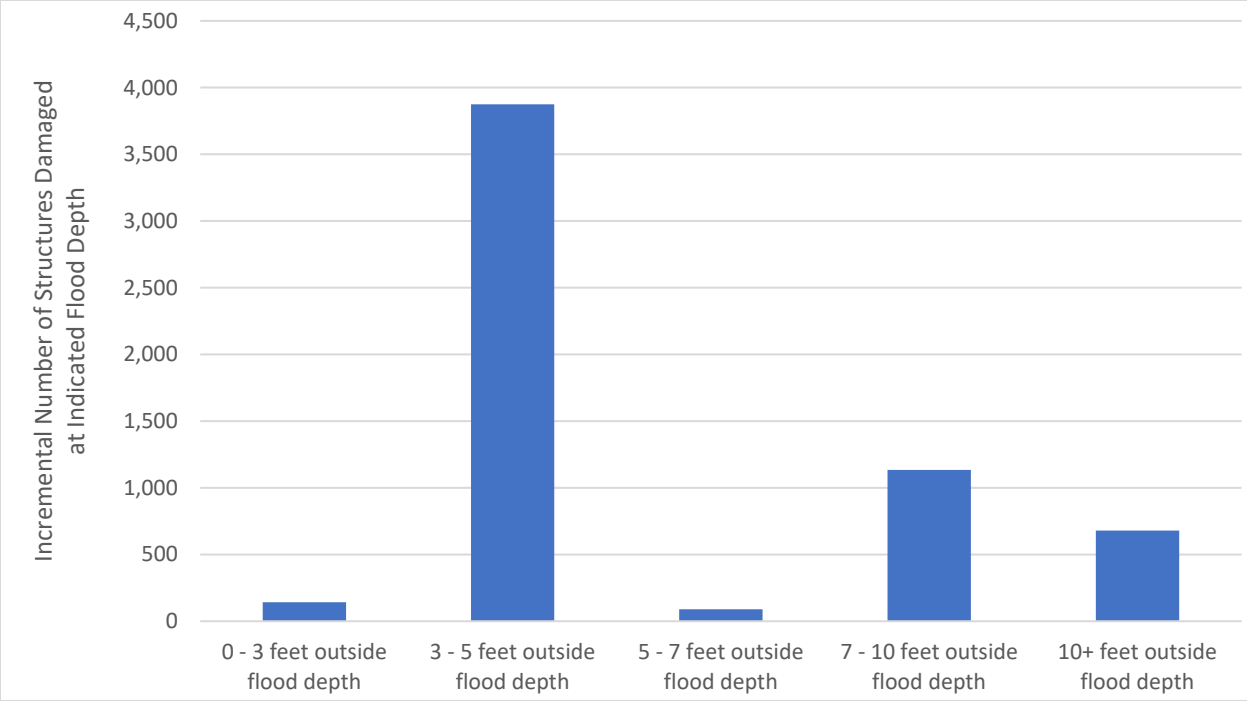


Figure 2. Structures in Unincorporated County Areas Likely to be Substantially Damaged at Various Flood Depths

2. [Municipality/County Name] Capabilities and Responsibilities

2.1. Personnel

Note: Titles and responsibilities of officials and personnel in this section should be updated to reflect your municipality/county.

2.1.1. FLOODPLAIN ADMINISTRATOR RESPONSIBILITIES

[municipality/county name]'s floodplain administrator is responsible for ensuring that flood damage estimates are obtained after a flood and that substantial damage determinations are made when the definition of substantial damage is met. The floodplain administrator will be responsible for ensuring the proper performance of the following activities related to substantial damage response:

Note: Update the responsibilities of the floodplain administrator to reflect your municipality/county. Examples of responsibilities include:

- Coordinating outreach efforts.
- Preparing and distributing mailings to inform the public about the substantial damage assessment process.
- Notifying owners of substantially damaged properties about permitting procedures for rebuilding.
- Requesting additional help through mutual aid agreements.
- Providing training and outreach to the staff and contractors.
- Identifying available resources.
- Notifying elected officials and county departments—including fire, police, emergency services, planning, and building code—about the upcoming fieldwork.
- Planning the substantial damage field inspections, including initial field surveys, establishing damage trends, preparing cost information, and collecting data.
- Hiring, training, supervising, certifying, and licensing staff for field operations.
- Ensuring follow-up coordination with owners of substantially damaged structures.
- Reviewing elevation certificates.
- Processing, maintaining, and tracking temporary occupancy permits and inspecting temporary occupancy buildings.

- Taking corrective action necessary to ensure compliance.
- Determining if damaged structures have been designated as historic or may be eligible for such designation.
- Coordinating final storage of substantial damage files with appropriate back up of records.

2.1.2. SUPPORT PERSONNEL RESPONSIBILITIES

Support for substantial damage response in [municipality/county name] is provided by other personnel or departments as follows:

- [List each supportive personnel or department]:
  - [List responsibilities]

Example:

- County Emergency Management:
  - Provides coordination and oversight of disaster response.
  - Assists with outreach and education on substantial damage inspections and determinations if needed.
  - Notifies elected officials and county departments, as appropriate, about the upcoming fieldwork.
  - Provides assistance with recovery and mitigation outreach.

2.1.3. STAFF AUGMENTATION

Depending on the severity of the flooding incident and the availability of current staff, [municipality/county name] might need to reach out for additional response support from the state NFIP Office, the local FEMA region, or [list any applicable regional/state organizations that may be able to provide assistance].

To address any gaps in capacity or capability, the [municipality/county] may consider implementing procedures to secure staff augmentation resources on an as-needed basis through mutual aid agreements or on-call contract mechanisms. Types of assistance can range from staff support to equipment and materials, including additional staff for conducting substantial damage assessments. The following are potential organizations and avenues the [municipality/county] may consider for augmentation of resources:

- [list organizations/avenues available for staffing augmentation and describe the capabilities/resources each organization/avenue has to support the substantial damage response process]

Additional organizations and volunteer groups that may be available to provide support will be evaluated on a case-by-case basis.

2.2. Programs

2.2.1. FLOODPLAIN MANAGEMENT PROGRAM SUBSTANTIAL DAMAGE CAPABILITY

[municipality/county name]'s capabilities to implement a substantial damage program under its floodplain management program have been assessed in the following categories:

- Flood damage prevention ordinance and permitting capabilities
- Personnel capabilities
- Outreach capabilities
- Other capabilities

The findings from these assessments are presented in Appendix B [revise appendix number or letter of appendix as needed for your SDRP].

2.2.2. PUBLIC OUTREACH STRATEGY

The floodplain administrator will coordinate with [list officials/departments responsible for community outreach] to develop a robust public outreach strategy to educate the public on substantial damage risk and procedures. For example, FEMA publications on substantial damage could be made during hurricane preparedness events or a section of the [municipal/county] website could provide information on substantial damage procedures.

2.2.3. ELEVATION CERTIFICATE PROMOTION AND ASSISTANCE

Note: The collection and review of elevation certificates are required for the Community Rating System program and are recommended for all successful floodplain management programs. Inclusion of this section and the information within is dependent on the conditions and programs present in your community.

Property owners can better understand their flood risk and insurance ratings by documenting their lowest floor. This information can help them troubleshoot areas of improvement—such as increasing venting or filling basements—to save on insurance premiums and protect their investment. It is also beneficial for the [municipality/county] to have this information easily accessible after a disaster.

[municipality/county name] will partner with surveyors to perform outreach to homeowners on the value of elevation certificates and assist in completing them. The [municipality/county] will also review elevation certificates to ensure they are completed fully and correctly.

2.2.4. EMERGENCY OPERATIONS PLAN

[Discuss the municipality/county emergency operations plan (or equivalent plan) and how responsibilities are outlined during and following a disaster event. Discuss if/how the emergency operations plan incorporates discussion of substantial damage activities/resources.] The SDRP will be incorporated into the Emergency Management Plan in future updates.

2.3. Tools

2.3.1. STRUCTURE INVENTORY DATABASE

[municipality/county name] tracks all development with additional approval requirements for any properties in the SFHA. The SID is set up in a spreadsheet that includes and is sortable by the following fields for each inventoried property:

Note: The below fields are fields to strive for in a structure inventory database. This list should be modified based on the fields available in your community.

- Parcel number
- Address
- City
- Zip Code
- Elevation certificate (Yes or No)
- Latitude
- Longitude
- Occupancy class as defined in Hazus software
- Year built
- Number of stories
- Square footage (of structure)
- Market value of structure
- Post FIRM (Yes or No)
- FEMA flood zone designation
- Post effective FIRM (Yes or No)
- Foundation type
- First floor height
- Flood depth in structure for the 40% damage trigger
- Flood depth outside structure for the 40% damage trigger
- Repetitive loss property (Yes or No)
- Mitigated repetitive loss property (Yes or No)
- NFIP severe repetitive loss property (Yes or No)
- Negative elevation rated policy (Yes or No)
- Hydrologic Unity Code (HUC) ID
- HUC Name
- Subdivision
- Triage Level

The SID assigns a substantial damage triage level based on the information available for each structure's vulnerability factors. These triage levels can be used to identify structures that are most likely to be substantially damaged so that the [municipality/county] can strategically deploy

resources to ensure that property owners are notified of substantial damage before any repairs begin. Triage levels are assigned as follows:

- **Level 1**—Unmitigated repetitive loss structures, minus-rated NFIP policy structures, and other structures with insufficient information on vulnerability factors.
- **Level 2**—Structures that were built before the community entered the NFIP (Pre-FIRM structures) or structures that are known to be located outside of the special flood hazard area at the time of their construction.
- **Level 3**—Structures that were built before the effective date of the current FIRM (Pre-effective FIRM structures).
- **Level 4**—Structures that were built after the effective date of the current FIRM but do not have an approved elevation certificate on file.
- **Level 5**—Structures that were built after the effective date of the current FIRM with an approved elevation certificate on file.

Example use of the SID in responding to a substantial damage event:

The [municipality/county] experiences a flood event that triggers its emergency response plan (activation of the emergency operations center), and flooding has impacted two neighborhoods.

As first responders are being deployed, the [municipality/county]'s floodplain administrator accesses the spreadsheet to sort the information by the two neighborhoods. The list will provide information by structure on the depth of flooding that would trigger 40 percent damage.

That depth can be provided to response personnel, with instructions to estimate depths in each subdivision. Simple instructions for estimating depths may include counting steps, estimating depth above top of curb, or knowing how high a stop sign is.

Ideally, information used for estimating depth would be memorialized with photos or established high-water marks. Following the response, this information would be conveyed back to the floodplain administrator for interpretation.

If the trigger depths are met in a given subdivision, full inspections will be needed. Otherwise, full inspections may not be warranted.

Include information on how the SID spreadsheet is set up. For example:

The spreadsheet is available in two different formats which include the same information:

- **Standard Spreadsheet Format**—This spreadsheet provides data in a format that the [municipality/county]'s floodplain management staff can use manually for rapid visual screening to identify structures in need of a full inspection.
- **Geographic Information System (GIS) Format**—This geodatabase provides data in a full GIS format so that a GIS technician can import it into GIS to create maps and conduct spatial queries. This data could be used to create maps with visual cues to inform responders as they deploy into impacted areas. For large-scale events, this data format could be used in

applications such as ESRI's "Survey 123" platform to capture data in real-time and allow for analysis using Hazus or similar risk assessment platforms.

2.3.2. FEMA'S SUBSTANTIAL DAMAGE ESTIMATOR

Note: Include this section if using the Substantial Damage Estimator tool to populate the SID for your community.

Communities that participate in the NFIP are required to determine whether damage, of any origin, to structures within a mapped SFHA meets the criteria for substantial damage. FEMA developed the Substantial Damage Estimator (SDE) tool to assist state and community officials in estimating substantial damage to residential and non-residential structures. The SDE tool allows community officials with limited appraisal or construction backgrounds to develop reasonable estimates of structure values and structure-specific damage in accordance with NFIP requirements.

The SDE tool uses damage estimates for individual structure elements to determine whether the structure as a whole is substantially damaged. The tool includes assessment options for residential structures (single-family homes, town or row houses, and manufactured homes) and common non-residential structures (e.g., office buildings, strip malls, restaurants). It may be used in conjunction with an industry-accepted, residential construction cost-estimating guide.

The SDE tool provides a formal methodology for collecting and organizing the data required to make defensible determinations that meet the NFIP criteria for substantial damage or substantial improvement. The data needed to make a determination are identified within the tool. Users can add photographs and latitude and longitude coordinates to the structure assessments within the tool to further define the structure being inspected. Figure 3 shows an example of data included in the SDE tool.

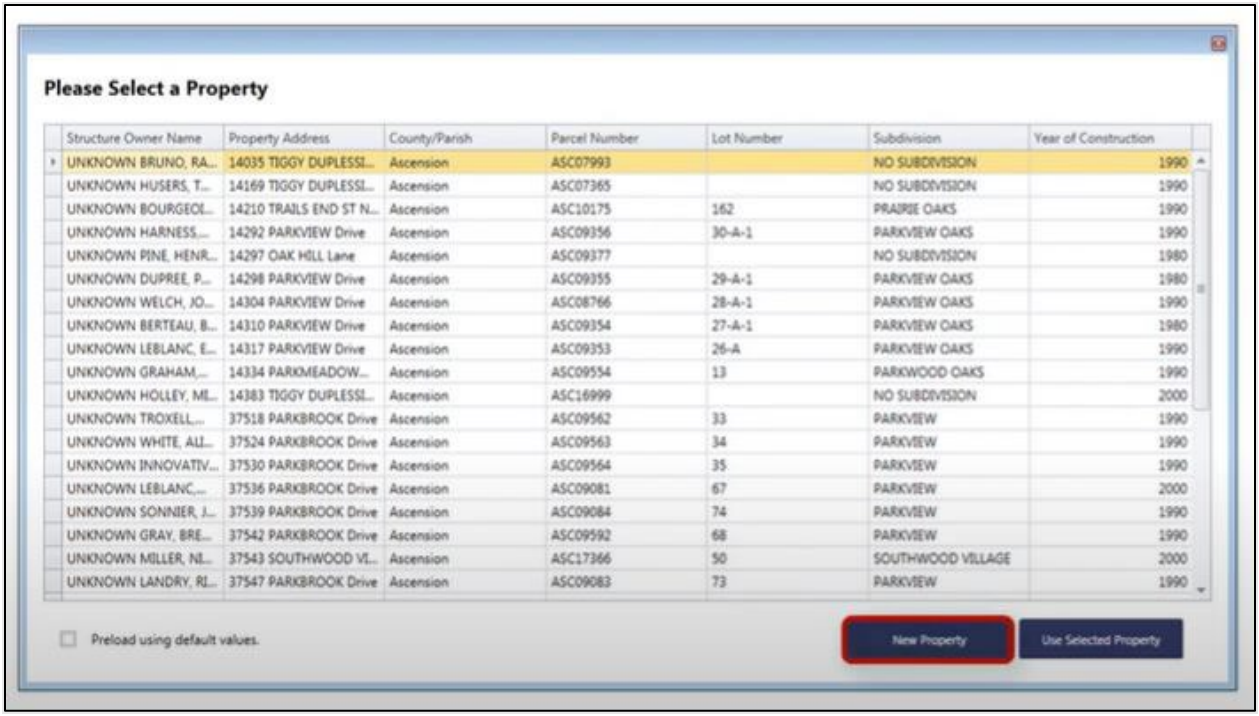


Figure 3: Sample Populated SDE View

[municipality/county name]'s SID has been imported into version 3.0 of the SDE tool to pre-populate the SDE database. This will enable [municipal/county] staff to expedite the SDE process when flood events occur.

2.3.3. U.S. ARMY CORPS OF ENGINEERS' DEPTH/DAMAGE CORRELATION

Note: Include this section if using the U.S. Army Corps of Engineers' depth-damage correlation curves in the development of your community's SID.

The U.S. Army Corps of Engineers depth-damage correlations are a suite of depth-damage curves extracted from FEMA's Hazus software. The correlations provide estimates for typical structure damage resulting from a defined flood depth at the structure. This correlation was used in development of the SID to establish the flood depths that would result in 40 percent damage at each inventoried structure.

3. Damage Assessment Procedures

Having a predetermined process to follow when a major flood event occurs is mission critical to the uniform application of a substantial damage management program. That process must take into account the capabilities of the of [municipality/county], identify the resources available, and draw upon a thorough understanding of the scale of damage that occurs. [municipality/county name] has developed an action plan that is simple, agile, and scalable.

3.1. Event Evaluation and Response

Once an event with the potential to cause substantial damage occurs or is forecast, the [municipality/county] floodplain administrator will initiate actions to evaluate the level of impact of the event, position necessary staff and resources, and begin the distribution of outreach materials as necessary. The evaluation and response phase will include the following steps:

- Brief all elected officials and critical [municipality/county] staff.
- Gather event forecast information, river/tidal gauge readings, or other monitoring system data to determine the likely extent of the incident.
- Confirm localized event information such as flood depths in individual neighborhoods with first responders' observations and reporting during the flood's peak levels or after floodwaters have receded.
- Determine the number of properties likely to be damaged by the event by comparing observed/forecast event impacts and the property information included in the SID.
- Determine if the number of properties requiring inspections will require additional outside staffing resources. This determination can identify if the event is a:
    - Minor event that does not result in substantial damage, requiring no substantial damage inspections
    - Moderate event that results in likely substantial damages that can be handled by [municipality/county] staff
    - Major event that results in widespread substantial damages, requiring additional assistance from outside agencies
- Request staff augmentation from outside agencies as necessary. The [municipality/county] may reach out to the following groups and agencies for assistance:
    - [list groups/agencies]

The floodplain administrator will coordinate with [department/official responsible for outreach] to begin distribution of previously developed message templates to inform the public of incidents and procedures as follows:

- Distribute analog and digital messages to prepopulated recipient lists at pre-set intervals.
- Issue a press release (see Appendix C [revise appendix number or letter of appendix as needed for your SDRP]) to quicky get the word out to residents about rebuilding plans and resources they may need covering topics such as:
    - Permit requirements.
    - Substantial damage requirements including information on elevation and freeboard ordinance requirements.
    - Safety hazards.
    - Update on public utilities (i.e., what is working and what is not, a timeline of when things will be restored, etc.).
    - Locations for resources, shelters, and food.
    - State and federal assistance.
    - How to file flood insurance claims and how to appeal claims payments.
    - NFIP Increased Cost of Compliance procedures.
    - A point of contact to answer questions from the public.

3.2. Inspections and Damage Determinations

As the event subsides, the [municipality/county]'s floodplain administrator will begin the protocol for incident operations, communicating with support staff who will conduct all activities related to the substantial damage inspections. The floodplain administrator will manage the following steps to complete the inspection and damage determination phase:

- Using the SID, identify the structures that will require inspections.
- Identify the number and names of inspectors required for the inventory and form the inspection teams.
- Prepare a contact list of all project personnel and local agencies.

- Prepare the letter from the [municipality/county] to be provided to each property owner where an inspection is being conducted that explains why the inspection is being conducted (see Appendix D [revise appendix number or letter of appendix as needed for your SDRP]).
- Hold a meeting with the inspection team, comprised of [municipality/county] staff and any augmented support to:
    - Review NFIP requirements for substantial damage.
    - Review the SDE tool and user manual
    - Outline areas to be surveyed, potential access issues, and staff assignments
    - Identify the property and structure access procedures for locked or occupied structures.
- Research, obtain, or develop unit costs for determining reasonable structure values for residential and non-residential structures in the community.
- Instruct inspection team to begin inspections once confirmation is received from the emergency management coordinator that it is safe to proceed.
- Instruct inspection team to post notices on properties so that property owners are aware of permit requirements.
- Collect and track substantial damage determinations from inspection team for structures located in the SFHA.

4. Post-Determination Response Procedures

4.1. Notification Procedures

Once the inspections have been conducted and determinations made, the floodplain administrator will notify property owners whose structures have been determined to be substantially damaged as follows:

- Mail a letter to the address on file, either stating that no substantial damage has been found or confirming substantial damage and explaining the appeals process (see Appendix E [revise appendix number or letter of appendix as needed for your SDRP]). Note that it may also be advisable to post this information on the structure where there is concern that mailed materials will not reach the intended recipient.

- Provide a notice explaining permit requirements and details (Appendix F [revise appendix number or letter of appendix as needed for your SDRP]).

- Inform property owners how they may call the [municipality/county] for verification or go to [municipality/county] offices for a copy of the notification letter

4.2. Opportunity for Appeals

The floodplain administrator will create an appeals process with standards for quality control. Appeals to the substantial damage determinations usually fall into two categories:

- **Market value**—The [municipality/county] bases market value on data from the [name the agency/source of appraisals and the time frame the appraisals are from]. A property owner who does not agree with this data can obtain a new private appraisal. If the [municipality/county and any additional agencies that set base market value] agree with the new data, then determinations can be adjusted. If the updated data is used, it might change the property value for future tax assessments.

  Note: If there will be a standardized cost to repair per square foot with modification factors that is triggered by a larger event, please note.

- **Damage estimates**—In determining damage estimates, the [municipality/county] uses the FEMA Substantial Damage Estimator tool. A property owner who disagrees with the damage assessment can submit qualified evidence of less damage. The floodplain administrator will consider amending the estimate.

4.3. Permitting

After substantial damage determinations are complete, the floodplain administrator will oversee the issuing of permits for repair and reconstruction. The most important points of involvement are as follows:

- Helping owners, design professionals, and contractors understand requirements to bring buildings into compliance with all the requirements for flood-resistant construction based on flood zone and base flood elevation.

- Issuing permits for work to bring substantially damaged buildings into compliance, inspecting work during construction, and providing owners with certificates of occupancy or other documentation of completion and compliance.

4.4. Mitigation Opportunities

Mitigation alternatives that could help to reduce future flood risk are included in Appendix G [revise appendix number or letter of appendix as needed for your SDRP]. In most cases, substantial damage mitigation measures are limited to acquisition or elevation, as described below.

4.4.1. ELEVATION

Whenever the floor of a home is below the 100-year flood elevation, physically elevating the structure is often recommended. Elevation is one of the most effective means to prevent flood damage. Financial assistance may be available. The [municipality/county] requires all substantially improved residential buildings to have their lowest floor elevated to [note the elevation requirement (minimum is the base flood elevation].

4.4.2. RELOCATION

One of the most effective approaches to preventing further flood damage to a building is relocation or clearing of the structure and leaving the vacated structure site as open space or recreation area. Property owners retain the right to select this as a mitigation method. They may sell their property to a government agency, or an agency dedicated to the preservation and management of local open space. The property owner can also relocate the building to another property. Alternatively, the building can be moved to another area of the same property, if that area is outside the flood hazard area. The property owner can take advantage of federal funding for such mitigation.

4.4.3. INSURANCE COVERAGE FOR MITIGATION ACTIVITIES

FEMA's Increased Cost of Compliance (ICC) coverage under the NFIP provides payment to help cover the cost of mitigation activities that will reduce the risk of future flood damage to a building. When a building covered by a standard flood insurance policy suffers a flood loss and is declared to be substantially damaged, ICC will pay up to $30,000 to bring the building into compliance with state or community floodplain management laws or ordinances. Usually this means elevating or relocating the building so that it is above the base flood elevation. It also covers floodproofing for non-residential structures. ICC coverage applies solely to buildings and only covers the cost of the compliance measures undertaken. It is filed separately from a normal flood insurance claim.

5. SDRP Review and Update Process

The [municipality/county] has identified measures for keeping this SDRP current through regular review and update as needed. The sections below describe the review and update process.

5.1. Maintaining the Structure Inventory Database

The structure inventory database (SID) is considered to be a functional component of this SDRP. The floodplain administrator will maintain the SID to ensure that it is current. The SID spreadsheet will be updated when structures that were identified as likely substantial damage properties have been mitigated. The SID should be evaluated on an annual cycle to account for changes from mitigation a property owner implements or from grants that become available as a source of funding. The review should address at least the following:

- Annual maintenance tasks
- Removal of structures
- Substantial improvements
- Changes in market values
- Changes to SFHA boundaries
- Mitigation of structures
- New development and compliance

There can also be additions to the SID from new losses. Any changes to the inventory will be archived.

5.2. Evaluation and Plan Update Procedures

The floodplain administrator will evaluate and revise as needed the SDRP and the SID every five years, following a disaster incident that triggers the use of the SDRP, or following an exercise of the local [Emergency Operations Plan or equivalent emergency plan]. Evaluation should take place [describe the time of year when the evaluation will take place. Note: it is recommended to schedule this evaluation when flood risk is lowest]. It will include updating pre-incident actions based on experience and any changes in local conditions. Any changes will be provided to elected officials for their information but will not require formal approval or adoption.

When the local [Emergency Operations Plan or equivalent emergency plan] is exercised, the SDRP will also be exercised. [describe the time of year when the excercise will take place. Note: it is recommended to schedule this evaluation when flood risk is lowest].

As part of the SDRP evaluation, the SDRP Evaluation Tool template in Appendix H [revise appendix number or letter of appendix as needed for your SDRP] will be used to assess how the core capabilities of this SDRP worked or have been changed, based on experience, to better serve the [municipality/county].

Any changes made to the SDRP as a result of the evaluation will be provided to elected officials for their information but will not require formal approval or adoption. Changes to the SDRP that would trigger changes in the [Emergency Operations Plan or equivalent emergency plan] will also be communicated with elected officials and emergency management staff.

5.3. Privacy Act Considerations

Flood insurance claims and repetitive loss data will not be identified in the [municipality/county]'s SID. Flood insurance claims and repetitive loss data will be maintained securely and only accessible by necessary staff such as the floodplain administrator.

5.4. Communications Plan

Information about the SDRP evaluation process and results will be provided to the public and to agencies as follows:

- [municipality/county] staff and the [municipality/county governing body] will be informed of the evaluation and updates to the SDRP by receiving a copy of the initial plan and any updates.
- FEMA and the state NFIP office will be informed of the evaluation of the SDRP by receiving a copy of the initial plan and notification about any updates.

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Appendix A. Map Atlas of Potential Substantial Damage Properties

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Maps To Be Inserted

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Appendix B. Capability/Capacity Assessment Tables

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The following tables provide an example of how a community can evaluate their floodplain management program and substantial damage capabilities.

Table B-1: Flood Damage Prevention Ordinance and Permitting Capabilities

Codes and Ordinance Review and Ordinance Review	
Copy of or a link to the [municipality/county]'s Flood Damage Prevention Ordinance	
How does the Flood Damage Prevention Ordinance address substantial damage and substantial improvement?	
Are there any higher standards (freeboard, cumulative qualifier, lower substantial damage/substantial improvement thresholds)?	
Has the [municipality/county] adopted the International Building Code and if so, what version?	
General Description of Permitting Process	
Does all development in the [municipality/county] require a permit?	
Does the [municipality/county] issue a stand-alone floodplain development permit?	
What is the code enforcement protocol?	

Does the [municipality/county] have a Building Code Effectiveness Grading Schedule rating?	

Table B-2: Personnel Capabilities

Floodplain Administrator	
Who is the [municipality/county]'s floodplain administrator by ordinance?	
Who is the [municipality/county]'s floodplain administrator in practice?	
Are there any Certified Floodplain Managers on staff?	
Building Official	
Who is the [municipality/county]'s building official?	
How many building inspectors does the [municipality/county] have access to?	
Emergency Manager	
Who is the [municipality/county]'s emergency manager?	
Does the [municipality/county] have an Emergency Operations Plan or a Comprehensive Emergency Management Plan?	
If there is an Emergency Operations Plan or Comprehensive Emergency Management Plan, is there any discussion or a placeholder for addressing substantial damage activities/resources?	
GIS Support	
What is the [municipality/county]'s GIS capability?	
Are there any staff that could help maintain a GIS database of properties in the Special Flood Hazard Area?	

Surge Capacity	
How does the [municipality/county] handle a need for surge capacity?	
Substantial Damage Response	
How familiar are critical staff with the FEMA substantial damage/substantial improvement requirements?	
What is the [municipality/county]'s capacity to implement and maintain a substantial damage procedure?	
What is the [municipality/county]'s ability to maintain a substantially damaged properties list?	
Prior Experience	
How many times in the past has the [municipality/county] had a flood such that it needed to do widespread substantial damage determinations?	

Table B-3: Outreach Capabilities

Communication Channels	
Does the [municipality/county] maintain a mailing list of properties located in the SFHA?	
Are there any other communication channels available?	

Periodic Outreach	
Does the [municipality/county] do any periodic outreach to properties located within the SFHA?	

Table B-4: Other Capabilities

Past Events	
Does the [municipality/county] have any historical data on the extent and location of past floods that have caused damage (i.e., high-water marks, or flood photos)?	

Performance Enhancement Recommendations

This Capability Assessment has allowed for identification of recommended improvements for [municipality/county]'s floodplain management program. These recommendations are listed below:

- [List the recommendations identified through your community's capability assessment]

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Appendix C. Press Release Template

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Example Press Release

RESIDENTS IN [MUNICIPALITY/COUNTY NAME] WITH DISASTER DAMAGE REMINDED OF PERMIT REQUIREMENTS

This will need to be adjusted depending on the situation after the disaster. Remove any language that is not applicable and add anything important that is missing. Work with the community public information officer or appropriate department to finalize language.

Residents of [municipality/county name], hopefully this message finds you and your family out of harm's way. This press release is intended to provide information useful to all community members.

Firstly, community members should be aware of the following safety hazards [fill in safety hazards here].

Additionally, there is a [municipality/county name] curfew in effect after [time].

The following resources for shelter and food are available to those in need: [Location] has been set up as a temporary shelter. Food will be provided at [location] during the hours of [times].

The following are updates for utilities. Electricity is still out, and [name of energy company/companies is/are] doing all they can to restore power. It can be expected to be restored [anticipated time if available, if not indicate it is still unknown]. The drinking water is currently [safe/unsafe] for consumption [if unsafe indicate when will be restored if known].

As property owners in [municipality/county name] contemplate clean up and repairs following [disaster], the floodplain administrator is reminding residents to obtain local permits before repairing or rebuilding flood-damaged structures. The permits are required as part of local government participation in the National Flood Insurance Program, providing eligibility for flood insurance, flood disaster assistance, state and federal grants and loans, and buyout funds for flood-prone property.

Local floodplain management ordinances require that permits be obtained for any construction or development activity in a floodplain area, including the repair or reconstruction of structures damaged by a disaster.

Special conditions apply to substantially damaged buildings—those in which the total cost of repairs is [substantial damage threshold] percent or more of the structure's pre-disaster market value. If a building is found to be substantially damaged, regulations require that repairs not begin until compliance with the local floodplain ordinance is demonstrated and will have the same building requirements as new construction. In some cases, that may require repairs that include elevating or flood-proofing the structure to reduce the potential for future flood damage.

The cost to repair must be calculated for full repair to "pre-damaged" condition, even if the owner elects to do fewer repairs. The total cost to repair includes structural and finish materials as well as labor. If labor and materials have been donated, they must still be assigned a value. If local building

codes require the structure to be repaired according to certain standards, these additional costs must be included in the full repair cost for the structure.

If you are filing a flood insurance claim, you need to report your losses to your insurance agent or company. An adjuster will be assigned to estimate your damage and advise you how to prepare "Proof of Loss" documentation. Adjusters may authorize advance partial payments to help owners start making repairs. After the adjuster and owner agree on the damage estimate, the adjuster sends documentation to the owner's insurance company and the claim is settled (paid), unless the claim is denied by FEMA. Often times, NFIP claims can be paid quickly and ahead of a community's effort to determine building permit requirements. Make sure you acquire the necessary permits for any work performed to avoid violating the building code and flood damage prevention ordinance.

The *National Flood Insurance Program Claims Handbook* can be found here: https://agents.floodsmart.gov/sites/default/files/fema-claims-handbook-04-2022.pdf

Information on how to start your claim can be found here: https://www.fema.gov/flood-insurance/resources-practitioners/file-your-claim

If you disagree with your insurance clam, you can file an appeal with your insurance company. The policyholder must submit the appeal within 60 days after the date of the insurance company's written denial letter.

Information on this process can be found here: https://www.fema.gov/sites/default/files/2020-09/fema_appealing-flood-insurance-claim-en_fact-sheet_jun2020.pdf

State and federal assistance may be available to property owners to reduce the chances of future flood damage. Mitigation assistance may cover costs of relocation or costs for elevating or purchasing flood-damaged structures. If damage is caused by a flood, flood insurance may also provide up to $30,000 to protect a structure from future flooding through a claims process known as ICC (Increased Cost of Compliance). The property owner must have had NFIP flood insurance prior to the flood event for ICC to become available.

Property owners and residents with [disaster name]-damaged buildings should contact the [municipality/county] floodplain administrator for more information on repair and reconstruction permits.

Any questions or concerns can be directed to:

[floodplain administrator name], [municipality/county name] Floodplain Administrator
[mailing address]
Phone: [phone number]
Fax: [fax number]
E-mail: [email address]

Appendix D. Letter of Introduction for Substantial Damage Inspections

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[municipality/county], [state]
[department/office responsible for floodplain management]
[address]

Date:

Dear Structure Owner or Occupant:

The bearer of this letter is on official business for [municipality/county name] during the hours between [time range], [date range/days of the week]. As a result of the flooding that occurred between [date] and [date], [municipality/county] staff will be inspecting buildings throughout the community for evidence of substantial damage. This evaluation is required by our [name of flood damage prevention ordinance]. The inspectors will require approximately 30 minutes for a residential inspection and from 30 to 90 minutes for non-residential buildings to inspect for exterior and interior damage. They will record the information required by the [department/office responsible for floodplain management] to make substantial damage determinations. After the [municipality/county] 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 [name of flood damage prevention ordinance] and current building code and may require a permit. Construction activities that are undertaken without a proper permit are violations and may result in citations, fines, the removal of the non-compliant construction, or other legal action.

If you refuse admittance to the inspectors, your address will be provided to our [municipality/county attorney title] 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 between the hours of [time range], [date range/days of the week], or e-mail to [email address of floodplain administrator].

Sincerely,
[name of floodplain administrator].

Floodplain Administrator
[phone number]

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Appendix E. Substantial Damage Determination Letters

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[municipality/county], [state]
[department/office responsible for floodplain management]

(date)

(recipient name)
(recipient address)
(city, ST Zip)

RE: Substantial Damage Evaluation—(subject property address)

Dear (Mr./Ms. Last name)

Subsequent to the recent disaster damage, a damage assessment has been completed on the property referenced above. This is a part of the floodplain management responsibilities in order for [municipality/county name] to maintain the availability of flood insurance and disaster assistance to residents. The following information relates to the address referenced above:

Community Name:	[municipality/county name]
Flood Damage Timeframe:	(Month, Year)
Parcel Zone Information:	(FEMA flood Zone)
Total Damage:	($dollar value)
Fair Market Value:	($dollar value)
Percent Damaged:	(value %)

The determination is that this structure is declared **Substantially Damaged** and must be brought into compliance with the [title of local floodplain ordinance] prior to repair and reoccupation. For this structure to be in compliance with the ordinance, the structure must be elevated, moved outside the floodplain, or demolished.

Building inspections, floodplain development permits, and an elevation certificate will be required prior to occupancy. This structure may **NOT** be occupied until these corrections are made. Please contact this office at your earliest convenience to make an appointment to discuss your upcoming project.

If you have any additional questions, feel free to give me a call at [phone number of floodplain administrator] or email at [email address of floodplain administrator].

Sincerely,

[name of floodplain administrator]
Floodplain Administrator

[municipality/county], [state]
[department/office responsible for floodplain management]

(date)

(recipient name)
(recipient address)
(city, ST Zip)

RE: Substantial Damage Evaluation—(subject property address)

Dear (Mr./Ms. Last name)

Subsequent to the recent disaster damage, a damage assessment has been completed on the property referenced above. This is a part of the floodplain management responsibilities in order for [municipality/county name] to maintain the availability of flood insurance and disaster assistance to residents. The following information relates to the address referenced above:

Community Name:	[municipality/county name]
Flood Damage Timeframe:	(Month, Year)
Parcel Zone Information:	(FEMA flood Zone)
Total Damage:	($dollar value)
Fair Market Value:	($dollar value)
Percent Damaged:	(value %)

The determination is that his structure is declared: **Not Substantially Damaged**

An approved floodplain development permit is required for any flood damage repairs, and it is attached. Please sign and date the permit and return it to my office. Be advised that we will make another determination if you elect to perform work other than what is necessary to repair the damage, such as additional renovations or upgrades or building an addition. **Construction activities that are undertaken without a proper permit are violations and may result in citations, fines, or other legal action.**

If you have any additional questions, feel free to give me a call at [phone number of floodplain administrator] or email at [email address of floodplain administrator].

Sincerely,

[name of floodplain administrator]
Floodplain Administrator

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Appendix F. Substantial Improvement/ Substantial Damage Notice to Property Owners

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REPAIRING YOUR BUILDING AFTER DAMAGE?

CONDUCTING ADDITIONS, RENOVATIONS, OR REMODELING YOUR BUILDING?

Save yourself time, aggravation, and money. Please read the following information.

If the lowest floor of your home or business is below the water elevation of the base flood (100-year flood) or another elevation established by your community, there are floodplain management requirements that may affect how you repair, renovate, or remodel the building. These requirements are [consistent with or exceed] the requirements of the National Flood Insurance Program and were established to protect public safety and investments from future flood damage.

HERE'S WHAT YOU NEED TO KNOW ABOUT SUBSTANTIAL DAMAGE AND IMPROVEMENT

SUBSTANTIAL DAMAGE means damage of any origin sustained by a building whereby the cost of restoring the building to its before-damage condition would equal or exceed [substantial damage threshold] percent of the market value of the building before the damage occurred. (Note: The cost of the repairs must include all costs necessary to fully repair the building to its before-damage condition).

SUBSTANTIAL IMPROVEMENT means any alteration, rehabilitation, addition or other improvement of a building, the cost of which equals or exceeds [substantial improvement threshold] percent of the market value of the building before the start of construction of the improvement.

If a building is substantially damaged or substantially improved, it must be brought into compliance with local floodplain management requirements, which include elevating residential buildings to or above a minimum elevation required by the community. The requirements allow non-residential buildings to be dry floodproofed rather than elevated. Following National Flood Insurance Program requirements, communities have the responsibility to determine substantial damage and substantial improvement as follows:

1. [municipality/county name] may estimate market value by using data from the [name the agency/source of appraisals] or real estate appraisals made by other parties within the last [time frame appraisals are acceptable from]. A property owner who does not agree with this data can obtain a new private appraisal. If the [name the agency/source of appraisals] and [municipality/county] agree with the new data, then determinations can be adjusted. If the updated data is used, it might change the property value for future tax assessments.
2. You must obtain and submit to your floodplain administrator a detailed and complete cost estimate for the addition, remodeling, reconstruction, and/or repair of all damage incurred by your building. The cost for construction must be prepared and signed by a licensed general contractor. The [municipality/county or your community] [may require/requires] the contractor to

sign an affidavit indicating that the cost submitted includes repairs of all damage or all improvements to your building, not just structural work.

3. [municipality/county name] will evaluate the cost of improvements or cost of repairs and determine if they are fair and reasonable. For repair of storm or flood damage, pre-storm prices and rates will be used. The cost of improvements or repairs does not include items not considered a permanent part of the building (i.e., plans, surveys, sidewalks, pools, screens, sheds, gazebos, fences, etc.).
4. If the [municipality/county] determines your damaged building incurred "substantial damage" or is proposed to be "substantially improved," then an Elevation Certificate must be submitted to the [municipality/county] floodplain administrator to determine the elevations of the existing buildings. Elevation Certificates must be prepared by licensed professional surveyor. Garages and carports are not considered to be the "lowest floor."
5. If the existing floor is below the base flood elevation, the building must be elevated to or above that level [plus any freeboard requirement in place]. Likewise, all electrical and mechanical equipment (heating and cooling, etc.), bathrooms and laundry rooms must be elevated to or above that level. Only parking, building access and limited, incidental storage is allowed below the elevated building, but only if the walls enclosing those areas comply with [name of state building code] requirements, including flood openings. If engineering analyses indicate dry floodproofing is feasible, non-residential buildings may be dry floodproofed instead of being elevated.
6. If the building is found to conform to all of the requirements for the flood zone in which it is located, repairs and improvements may be performed provided they maintain conformance with the floodplain management requirements. This means if the lowest floor, electrical and mechanical equipment, laundry, and bathroom are already above the required elevation; if the type of foundation is permitted in the flood zone; if enclosures below the elevated building comply; and if all other aspects of the building conform to the requirements, no additional flood related requirements may be imposed.
7. Building plans must be prepared to show how the building is to be elevated and brought into compliance with all flood-related requirements. If the building is to be dry floodproofed, the plans must be prepared and certified by a registered professional engineer or architect. Blank certificates for this purpose are available from the floodplain administrator.
8. Following a Presidential disaster declaration, the Small Business Administration may make loans available for both home and business owners for purposes of bringing buildings into compliance. Proof that your community determined the building incurred "substantial damage" is required.

Building Repairs or Improvements Subject to Determination of Substantial Damage/Improvement

In determining whether a project represents substantial damage or substantial improvement, costs for all of the following items will be considered:

- All structural elements including:
  - Spread or continuous foundation footings and pilings
  - Monolithic or other types of concrete slabs
  - Bearing walls, tie beams and trusses
  - Wood or reinforced concrete decking or roofing
  - Floors and ceilings
  - Attached decks and porches
  - Interior partition walls
  - Exterior wall finishes (e.g., Brick, stucco or siding) including painting and decorative moldings
  - Windows and doors
  - Re-shingling or retiling a roof
  - Hardware
  - Chimneys or flue pipes
- All interior finish elements, including:
  - Tiling, linoleum, stone or carpet over subflooring Bathroom tiling and fixtures
  - Wall finishes (e.g., drywall, painting, stucco, plaster, paneling, marble or other decorative finishes) Kitchen, utility and bathroom cabinets
  - Built in bookcases, cabinets, and furniture
  - Hardware
- All utility and service equipment, including:
  - HVAC equipment
  - Repair or reconstruction of plumbing and electrical services
  - Light fixtures and ceiling fans
  - Security systems
  - Built in kitchen appliances

  - Central vacuum systems
  - Water filtration, conditioning, or recirculation systems
  - Fireplaces, inserts, and wood heaters
- Labor and other costs associated with demolishing, removing, or altering building components
- Overhead and profit

Increased Cost of Compliance

NFIP flood insurance policies include Increased Cost of Compliance (ICC) coverage for buildings in Special Flood Hazard Areas. As of 2018, ICC coverage provides up to $30,000 to help cover the costs incurred if damage caused by flooding is determined by a community to be substantial damage. A substantial damage determination triggers the requirement that owners bring buildings into compliance with floodplain management requirements for new buildings, which may mean elevating buildings and making other changes based on flood zone.

ICC claims can help pay for relocating, elevating, demolishing buildings, and for dry floodproofing non-residential buildings. Owners can assign ICC payments to communities seeking grant funds for mitigation; the assigned ICC claim funds are used as part of the non-federal share required by FEMA mitigation grant programs.

Floodplain administrators have a key role in the ICC claim process. The most important points of involvement:

- Making substantial damage determinations, whether based on a one-time, 50% determination (costs compared to market value [note if higher standard used in your community]) or based on repetitive flood damage (if specified in local floodplain management regulations in the definition for “substantial damage”).
- Helping owners, design professionals, and contractors understand requirements to bring buildings into compliance with all of the Building Code requirements for flood- resistant construction based on flood zone and base flood elevation.
- Issuing permits for work to bring substantially damaged buildings into compliance, inspecting work during construction, and providing owners with Certificates of Occupancy or other documentation of completion and compliance.

Appendix G. Mitigation Alternatives

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Mitigation Alternatives

Successful mitigation often requires multiple strategies. The Community Rating System Coordinator's Manual (FEMA 2017) breaks the primary types of mitigation down as follows:

- Preventive activities keep flood problems from getting worse. The use and development of flood-prone areas is limited through planning, land acquisition, or regulation. They are usually administered by building, zoning, planning, and/or code enforcement offices.
- Property protection activities are usually undertaken by property owners on a building-by-building or parcel basis.
- Natural resource protection activities preserve or restore natural areas or the natural functions of floodplain and watershed areas. They are implemented by a variety of agencies, primarily parks, recreation, or conservation agencies or organizations.
- Emergency services are measures taken during an emergency to minimize its impact. These measures are usually the responsibility of city or county emergency management staff and the owners or operators of major or critical facilities.
- Structural projects keep floodwaters away from an area with a levee, reservoir, or other flood control measure. They are usually designed by engineers and managed or maintained by public works staff.
- Public information activities advise property owners, potential property owners, and visitors about hazards and ways to protect people and property from them, as well as the natural and beneficial functions of local floodplains. They are usually implemented by a public information office.

PREVENTIVE

[municipality/county name] regulates residential and commercial development through development permits for [list types of development permits required]. All construction in the [state] must meet the standards of the [state building code(s)]. Any project located in a floodplain, regardless of its size, requires a permit from the [municipality/county].

PROPERTY PROTECTION

Property protection measures are generally performed by property owners or their agents. FEMA has published numerous manuals to help property owners determine appropriate property protection measures:

- FEMA 259, Engineering Principles and Practices of Retrofitting Floodprone Residential Structures
- FEMA 312, Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding

- FEMA 551, Selecting Appropriate Mitigation Measures for Floodprone Structures
- FEMA 348, Protecting Building Utilities from Flood Damage
- FEMA 511, Reducing Damage from Localized Flooding
- FEMA 102, Floodproofing Non-Residential Structures
- FEMA 84, Answers to Questions about the NFIP
- FEMA 54, Elevated Residential Structures Book
- FEMA 268, Protecting Floodplain Resources: A Guidebook for Communities
- FEMA 347, Above the Flood: Elevating Your Floodprone House
- FEMA 85, Protecting Manufactured Homes from Floods and Other Hazards

The manuals listed above are available for review at FEMA's website. For a complete guide to retrofitting homes for flood protection, see FEMA P-312, Homeowner's Guide to Retrofitting 3rd Edition (FEMA 2014). The primary methods of property protection in the [municipality/county] are:

- Demolition/relocation.
- Elevation (structure or damage prone components such as furnace or air conditioning unit)
- Dry flood-proof (so water cannot get in).
- Direct drainage away from the building.
- Drainage maintenance.
- Sewer Improvements.

Acquisition

One of the most effective approaches to preventing further flood damage to a building is acquisition and relocation or clearing of the structure. The property would then serve as open space or recreation area. Property owners retain the right to select this as a mitigation method. They may sell their property to a government agency or an agency dedicated to the preservation and management of local open space. The property owner can also relocate the building to another property. Alternatively, the building can be moved to another area of the same property, if that area is outside the flood hazard. The property owner can also take advantage of federal funding for such mitigation.

Dry Flood-Proofing

Dry flood-proofing consists of completely sealing around the exterior of the building so that water cannot enter the building. Dry flood-proofing is not a good option for areas where floodwater is deep or flows quickly. The hydrostatic pressure and/or hydrodynamic force can structurally damage the building by causing the walls to collapse or causing the entire structure to float. However, in areas that have minimal velocity and low depth, dry flood-proofing can be a good option.

Many flood hazards can be mitigated with various forms of dry flood-proofing. Properties that do not have adequate protection of their low opening (window or basement door) can effectively raise the low opening height with a window well or a flood gate. The ultimate height of the low opening depends on several factors, such as: the level of flood protection desired, the appearance, and cost. The flood protection elevation could be set 1-foot higher than the existing low opening elevation, or it could be set to match the elevation of the lowest opening into a home that cannot be raised. This might be the elevation of the threshold of a door, for example.

The NFIP only allows dry flood-proofing for residential retrofits that are not classified as a substantial improvement. A substantial improvement is any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds [substantial improvement percentage] of the market value of the structure before the “start of construction” of the improvement.

Wet Flood-Proofing

Wet flood-proofing consists of modifying uninhabited portions of a home, such as a crawlspace, garage, or unfinished basement with flood-damage resistant materials, to allow floodwaters to enter the structure without causing damage (see Figure A-1). Wet flood-proofing requires portions of the building to be cleared of valuable items and mechanical utilities. A key component of wet flood-proofing is providing openings large enough for the water to flow through the structure such that the elevation of the water in the structure is equal to the elevation of the water outside of the structure. This equilibrium of floodwater prevents hydrostatic pressure from damaging structural walls.

Source: FEMA P-312, June 30, 2014

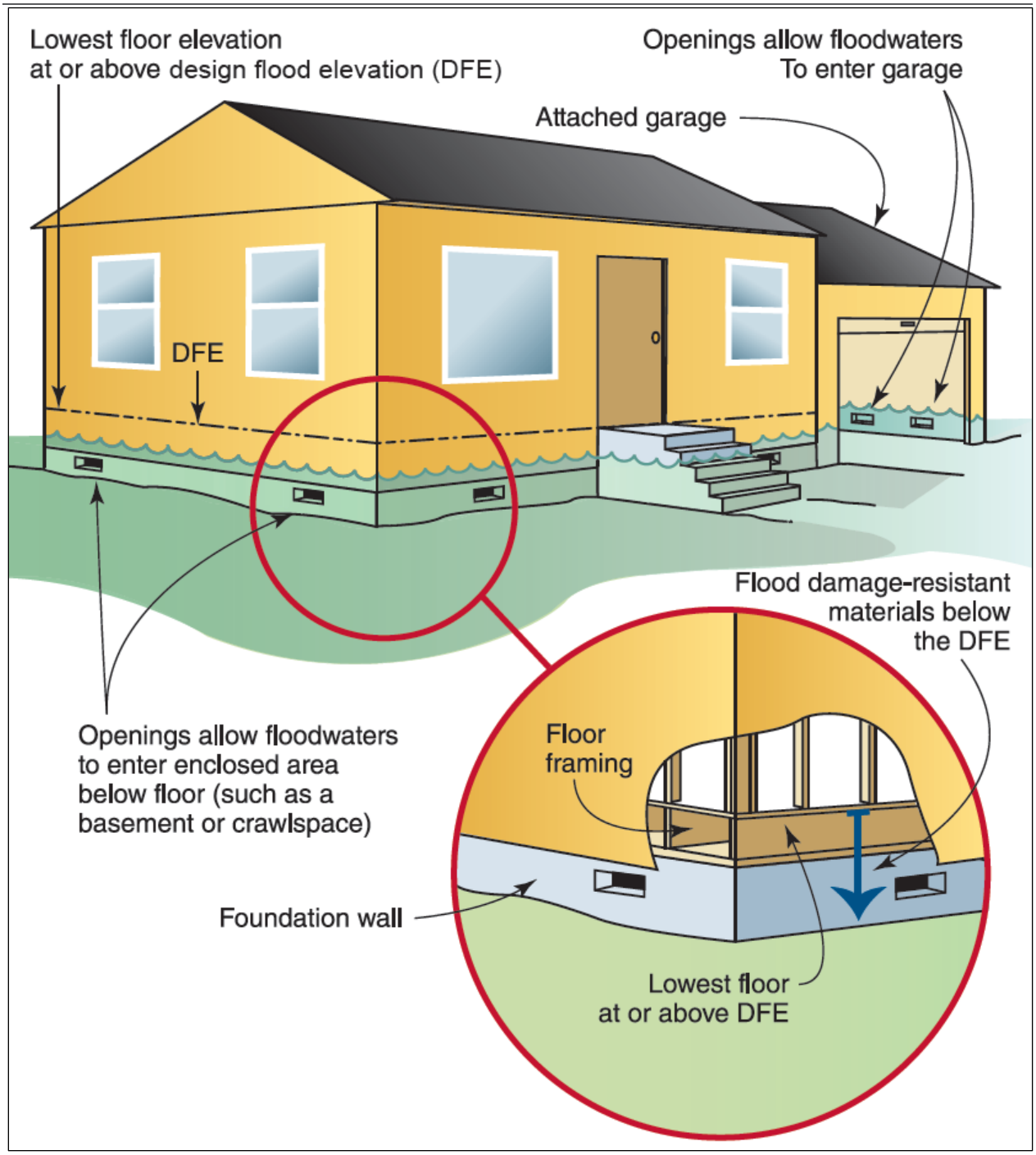

Figure A-1: Wet Flood-Proofing Example

Home Elevation

Sometimes flood-proofing is not sufficient and greater measures must be taken. For example, if the floodwaters are too high for dry flood-proofing and the inhabited area is too low for wet flood-proofing, it may be necessary to raise the structure. Whenever the floor of a home is below the

100-year flood elevation, physically elevating the structure is often recommended as it is one of the most effective means to prevent flood damage. Financial assistance may be available for floodproofing. The [municipality/county] requires all substantially improved residential buildings to have their lowest floor elevated [elevation requirement] the 100-year elevation.

Direct Drainage Away from the Building

In some cases, there are activities that the property owner can do on-site such as directing shallow floodwater away from a flood-prone structure. Shallow flooding can often be kept away from a structure if some simple improvements are made to the yard. Sometimes structures are built at the bottom of a hill or in a natural drainage way or storage area, so that water naturally flows toward them.

One solution is to regrade the yard. If water flows toward the building; a new swale or wall can direct the flow to the street or a drainage way. Filling and grading next to the building can also direct shallow flooding away. Although water may remain in the yard temporarily, it is kept away from the structure. When these types of drainage modifications are made, care must be taken not to adversely affect the drainage patterns of adjacent properties. Over time, the swales along the lot lines or in the back yard may get filled in. Property owners build fences, garages, sheds, swimming pools, and other obstructions up to the lot line. These drainage problems can be fixed by removing the obstructions and restoring the swales so they will carry water away from the building.

Drainage Maintenance

Dumping into the drainage system can cause debris to accumulate and restrict the flow of stormwater, increasing the potential of localized flooding. Dumping into drainage systems should be strongly discouraged.

NATURAL RESOURCE PROTECTION

Care should be taken to maintain the streams, wetlands and other natural resources within a floodplain or repetitive loss area. Removing debris from streams and channels prevents obstructions. Preserving and restoring natural areas provides flood protection, preserves water quality, and provides natural habitat.

EMERGENCY SERVICES

Advance identification of an impending storm is only the first part of an effective Flood Warning and Response Plan. To truly realize the benefit of an early flood warning system, the warning must be disseminated quickly to floodplain occupants, repetitive loss areas and critical facilities. Appropriate response activities must then be implemented, such as: road closures, directing evacuations, sandbagging, and moving building contents above flood levels. Finally, a community should take measures to protect public health and safety and facilitate recovery. These measures may include cleaning up debris and garbage, clearing streets, and ensuring that citizens have shelter, food, and safe drinking water.

STRUCTURAL PROJECTS

Structural projects keep floodwaters away from an area with a levee, reservoir, or other flood control measure. They are usually designed by engineers and managed or maintained by appropriate staff. The [note municipal department responsible for capital projects] develops and implements capital projects.

PUBLIC INFORMATION

One of the most important, and often overlooked, aspects of mitigation is public awareness. Awareness starts with recognition of the flood risk. FIRM panels, which designate areas of a community according to various levels of flood risk, can be viewed at www.FEMA.gov. Also, real estate transactions require disclosure of known flood hazards. The next level of awareness is related to flood hazard mitigation measures. Often homeowners can greatly reduce their risks with mitigation efforts if they are aware of the risks.

Appendix H. SDRP Evaluation Report Tool (Template)

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(Customize photo)

Evaluation of Substantial Damage Response Plan for [municipality/ county name]

This Evaluation Report/Improvement Plan tool outlines steps to review the SDRP process and core capabilities for reporting and updates. It is suggested that an evaluation of the SDRP occur after a major incident and/or at least once every 5 years. Annual updates are desirable if feasible. Corrections or improvements are to be recorded in the improvement plan at the end of this document.

SDRP Evaluation Overview

Evaluation year	[year]
Scope	This evaluation reviews the status of the existing SDRP for activation and response and identifies updates needed
Sponsor	[municipality/county name]
Point of Contact	[name] [title (Floodplain Manager or Building Official)] [phone number] [email]

Summary of Core Capabilities Analysis

Table 1 includes the objectives and performance ratings for each core capability as observed during the past year(s) or during an incident. The following pages provide an overview of the performance related to each core capability, highlighting strengths and areas for improvement. Performance ratings are defined as follows:

Table 1: Summary of Core Capability Performance

Core Capability	Objective	Performance Rating
Notification to community officials and the public	1. Review the ability to notify community officials and the public about changes to SDRP: • Officials—changes in how substantial damage information is disseminated. • Property Owner—changes in how the owner will be notified of substantial damage and permit options.	P, S, M, or U Explanation (if rated S, M, or U):
Floodplain staff coordination with other agencies	2. Review the substantial damage inspection process and how outside staff will be brought in to assist.	P, S, M, or U Explanation (if rated S, M, or U):
Coordination with EM and floodplain staff	3. Review of SDRP activation and trigger updates.	P, S, M, or U Explanation (if rated S, M, or U):
Review of SID and local market value data	4. Review buildings / structure assessment and market value data.	P, S, M, or U Explanation (if rated S, M, or U):

Performance ratings defined as follows:

- **Performed without Challenges (P):** Critical tasks associated with the core capability were completed in a way that achieved objectives and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- **Performed with Some Challenges (S):** Critical tasks associated with the core capability were completed in a way that achieved objectives and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
- **Performed with Major Challenges (M):** Critical tasks associated with the core capability were completed in a way that achieved objectives, but some or all of the following were observed: performance had a negative impact on performance of other activities; performance contributed to additional health and/or safety risks for the public or for emergency workers; performance was not in accordance with applicable plans, policies, procedures, regulations, and laws.
- **Unable to be Performed (U):** Critical tasks associated with the core capability were not performed in a manner that achieved objectives.

Core Capability: Notification to community officials and the public

Objective 1: Review the ability to notify community officials and the public about changes to SDRP.

Strengths

The [full or partial] capability level can be attributed to the following strengths:

- **Strength:** [Observation statement]

Areas for Improvement (only use for S, M and U ratings)

The following areas require improvement to achieve the full capability level:

- **Area for Improvement:** [Observation statement. This should clearly state the problem(s) or gap(s); it should not include a recommendation or corrective action, as those will be documented in the Improvement Plan.]
- **Reference:** [List any relevant plans, policies, procedures, regulations, or laws.]
- **Analysis:** [Provide a root cause analysis or summary of why the full capability level was not achieved if appropriate.]

Core Capability: Floodplain staff coordination with community assistance

Objective 2: Review the substantial damage inspection process and how outside staff will be brought in to assist.

Strengths

The [full or partial] capability level can be attributed to the following strengths:

- **Strength:** [Observation statement]

Areas for Improvement (only use for S, M and U ratings)

The following areas require improvement to achieve the full capability level:

- **Area for Improvement:** [Observation statement. This should clearly state the problem(s) or gap(s); it should not include a recommendation or corrective action, as those will be documented in the Improvement Plan.]
- **Reference:** [List any relevant plans, policies, procedures, regulations, or laws.]
- **Analysis:** [Provide a root cause analysis or summary of why the full capability level was not achieved if appropriate.]

Core Capability: Coordination with EM staff and Floodplain staff

Objective 3: Review of SDRP activation and trigger updates

Strengths

The [full or partial] capability level can be attributed to the following strengths:

- **Strength:** [Observation statement]

Areas for Improvement (only use for S, M and U ratings)

The following areas require improvement to achieve the full capability level:

- **Area for Improvement:** [Observation statement. This should clearly state the problem(s) or gap(s); it should not include a recommendation or corrective action, as those will be documented in the Improvement Plan.]
- **Reference:** [List any relevant plans, policies, procedures, regulations, or laws.]
- **Analysis:** [Provide a root cause analysis or summary of why the full capability level was not achieved if appropriate.]

Core Capability: Review of structure inventory database and market value data

Objective 4: Review buildings / structure assessment and market value data

Strengths

The [full or partial] capability level can be attributed to the following strengths:

- **Strength:** [Observation statement]

Areas for Improvement (only use for S, M and U ratings)

The following areas require improvement to achieve the full capability level:

- **Area for Improvement:** [Observation statement. This should clearly state the problem(s) or gap(s); it should not include a recommendation or corrective action, as those will be documented in the Improvement Plan.]
- **Reference:** [List any relevant plans, policies, procedures, regulations, or laws.]
- **Analysis:** [Provide a root cause analysis or summary of why the full capability level was not achieved, if appropriate.]

Improvement Plan

Core Capability	Objective	Issue/ Area for Improvement	Corrective Action	Primary Responsible Department	Department POC	Start Date	Completion Date
Notification to community officials and the public	1. Review the ability to notify community officials and the public about changes to SDRP:	1. [Area for Improvement]	1. [Corrective Action]				
Floodplain staff coordination with community assistance (outside)	2. Review the substantial damage inspection process and how outside staff will be brought in to assist.	1. [Area for Improvement]	1. [Corrective Action]				
Floodplain staff coordination with other agencies	3. Review the substantial damage inspection process and how outside staff will be brought in to assist.	1. [Area for Improvement]	1. [Corrective Action]				
Review of SID and market value data	4. Review of SDRP activation and trigger updates.	1. [Area for Improvement]	1. [Corrective Action]				

This IP has been developed specifically for the [municipality/county name] SDRP dated: [date of revision].