



Substantial Damage Inspection In-Field Guide

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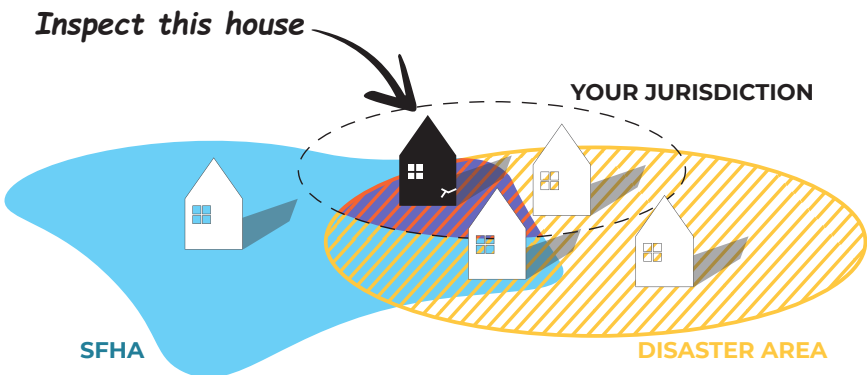
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Overview

Your jurisdiction participates in the National Flood Insurance Program (NFIP), which allows your residents to purchase federal flood insurance and renders residents and jurisdiction eligible for various forms of financial assistance. As condition of joining the NFIP, your jurisdiction has agreed to regulate development within its Special Flood Hazard Areas (SFHA). Regulating development includes conducting Substantial Damage Inspections (SDI), or evaluating damaged structures to determine cost of repairs as compared to pre-disaster market value.

SDI are necessary whenever a structure in a floodplain is damaged by any source, such as: tornado, fire, flood, or hail storm.

The process is described in detail in the State of Nebraska Substantial Damage Assessment Handbook (SDAH). The SDAH includes many templates, checklists, forms, and example letters. This guide is simply a field reference to supplement the complete handbook and to help answer questions encountered in the field.



Phase 1: Curbside Review

The Curbside Review is a tour of the area containing damaged structures that meet ALL of the following criteria:

- ☑ Within your jurisdiction's Special Flood Hazard Area (SFHA)
- ☑ Are damaged by the event
- ☑ Were built prior to your current floodplain ordinance

This initial screening of damage provides valuable information for planning the Substantial Damage Inspection schedule. **It is not necessary to enter a structure during the Curbside Review.**

Supplies you will need:

- ☑ Map of damaged areas
- ☑ SFHA maps
- ☑ Address or assessor's map
- ☑ Curbside review route map
- ☑ Digital cameras
- ☑ Safety gear: hi-vis vest, hard hat, gloves, glasses, and boots
- ☑ Photo identification or badges
- ☑ 100' tape measure
- ☑ Dry erase board and markers
- ☑ Mobile phones or radios
- ☑ Spare batteries
- ☑ Substantial Damage educational materials

Where is your SFHA? Go to ne.gov/go/floodriskmap to see an interactive map of where floodplain is in your community:



Data to collect:

Quantity of damaged structures
Estimated % damage for each structure, including:

- Structures damaged 25% and below, and
- 75% and above

Reference photos

Road closure or access issues

Health and safety issues

If applicable:

- Depth of flooding
- Duration of flooding

Note: A mobile home with 6" of water in it is probably a total loss due to how the homes are constructed.

Curbside Review Quick Assess Table

The table below shows an estimated percent damage to structure elements based on flood water depth. This tool is *optional*; it can help improve Curbside Review consistency. NOTE: *This tool is not to replace a substantial damage inspection.*

Flood Depth:	0.25'	0.5'	1'	2'	3'	4'	> 5'
Super-structure *	10	10	10	10	25	25	50
Exterior Finish *	0	5	10	30	40	50	50
Interior Finish *	0	5	10	30	40	50	100
Doors & Windows	0	10	15	40	40	75	100
Cabinets & Counters	0	20	50	50	50	70	100
Flooring *	100	100	100	100	100	100	100
Plumbing **	0	0	20	30	30	30	50
Electrical **	0	0	0	20	30	60	80
Built-in Appliances	0	0	50	100	100	100	100
HVAC	0	0	80	80	80	80	80

Basement or Crawlspace:

10%	Minor Clean-up, re-seal, or paint
50%	If cracked, bowed, or fractured on 1 or more walls
100%	If blow-out or caved-in walls

Slab-on-Grade:

10%	Foundation <i>not</i> undermined
30%	Foundation <i>is</i> undermined
75%	Foundation is broken, bowed, or uplifted

* Reduce by 40 - 50% for two story home

** Reduce by 25% for two story home

1. Scan the structure's exterior (finish and sheathing, insulation, and weather stripping) for dents, cracks, and tears.

2. Study the roof for minor and major damage.

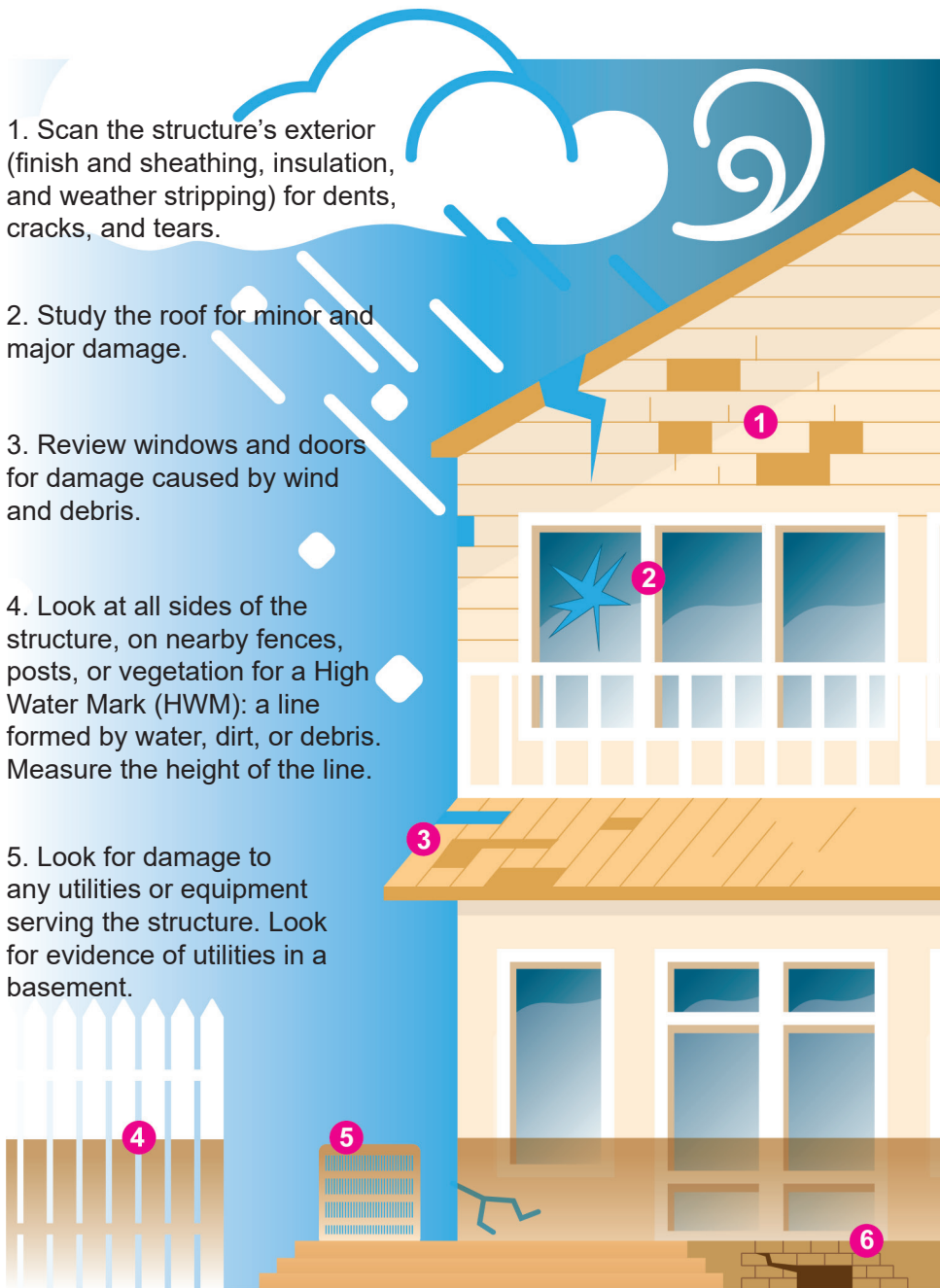
3. Review windows and doors for damage caused by wind and debris.

4. Look at all sides of the structure, on nearby fences, posts, or vegetation for a High Water Mark (HWM): a line formed by water, dirt, or debris. Measure the height of the line.

5. Look for damage to any utilities or equipment serving the structure. Look for evidence of utilities in a basement.

6. Examine the foundation for settlement, lateral movement, or cracking that affects structural stability. Look for evidence of a basement.

Step back to look for structural settling, roof warping, separation from foundation, or general lateral movement.



Phase 2: Substantial Damage Inspections

Before You Get Started

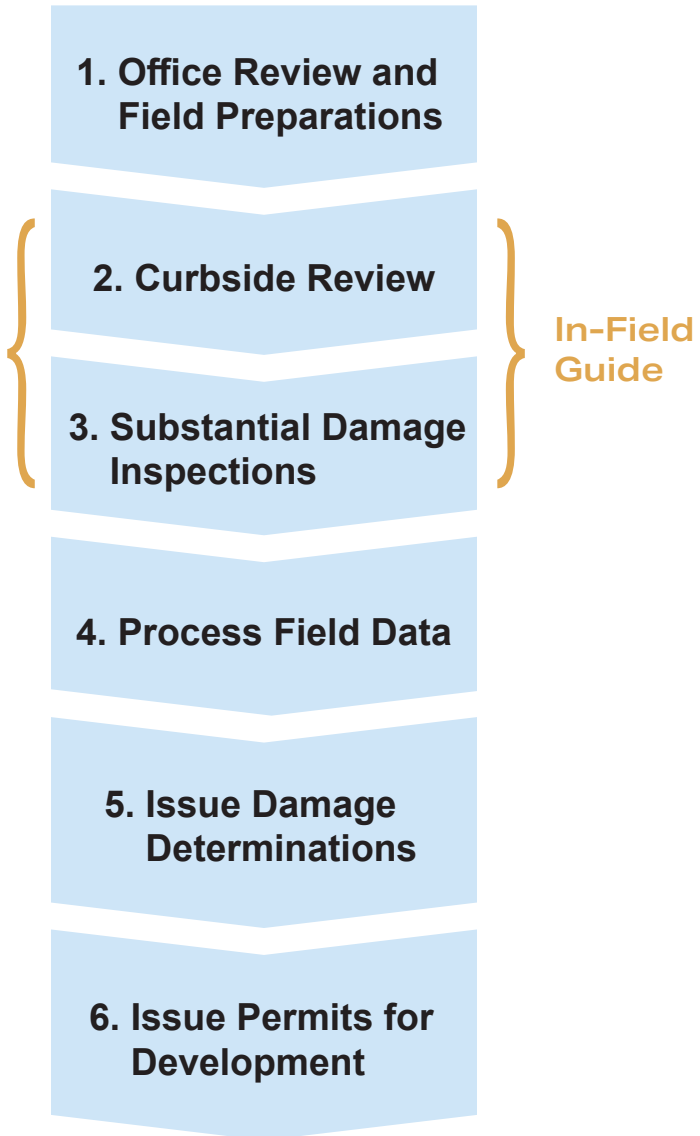
- ✓ **Develop an inspection schedule.** Revise schedule as progress is made and as access conditions allow.
- ✓ **Notify authorities of inspection plans.** If a disaster has been declared, stay in touch with the Incident Commander and notify them of inspection schedule and check in and out with them when arriving/departing the disaster area.
- ✓ **Do pilot inspections.** Demonstrate a standard procedure for how to do the inspections and demonstrate how to use the SDE tool.
- ✓ **Have an inspection resource packet for property owners,** including: contact cards, substantial damage, insurance, and floodplain information.
- ✓ **Field equipment assembled.**

Data to collect:

- ✓ **Property address.** Write this on a whiteboard and take a photo with the structure in the background.
- ✓ **Photos of each side of the structure.** Indicate the direction you are facing when photographing. Label the photos or ensure they contain a reference to the address for easier filing once back in office.
- ✓ **Structure attributes:** Structure type/use, number of stories, foundation type, superstructure material, roof covering, exterior finish, HVAC presence, and overall quality (pre-damage). Use copies of the Substantial Damage Inspection Worksheets from the SDAH pages 65-68.
- ✓ **Note the cause of damage.** If flood damage, find a water line and note the:
 - Duration of the flooding
 - Depth of water above ground
 - Depth of water above the first floor
- ✓ **Estimate damage percentages for each building component.** Use the Percent Damage Estimation Tables to determine the percent damaged for each structure element (SDAH pages 58-64).
- ✓ **Measure the ground area of the structure's footprint,** if unknown.

Substantial Damage Process Recap:

Remember that the field work you are doing today is part of a larger, longer process to ensure public safety in your jurisdiction's Special Flood Hazard Area.



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