


An aerial photograph showing a vast expanse of floodwater that has inundated a rural landscape. A long, narrow strip of land, likely a road or a levee, runs vertically through the center of the image, cutting through the water. The water is a dark, murky blue-grey color. In the far distance, a city skyline is visible under a clear, light blue sky. The overall scene conveys the scale of the flooding.

Substantial Damage & Substantial Improvement

Agenda

- 01 Welcome and Introductions
 - 02 Concept Introduction
 - 03 Disaster Preparedness
 - 04 Substantial Damage Assessments
 - 05 SD Exercise
 - 06 Substantial Improvement
- 

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Substantial Improvement/Damage

- Improvements & repairs can be permitted for existing structures in the floodplain.
- Minor improvements and repairs can simply be permitted.
- If the repair or improvement is valued at more than half the value of the structure it is considered **substantial** and is equated with new construction and must comply with your ordinance.

Title 455, Neb. Admin. Code, Chapt. 1 §002.21:

*“Substantial damage” shall mean damage of **any origin** sustained by an obstruction whereby the cost of restoring the obstruction to its before-damaged condition would equal or exceed 50* percent of the market value of the obstruction before the damage occurred.”*

Post Disaster Duties

- Repairs to structures in the floodplain **must** be permitted
- If the structure is damaged **more than 50%* of its value**, it needs to be brought into compliance with your floodplain ordinance
- Therefore, a **Substantial Damage Assessment (SDA)** must be performed before repairs can be permitted

44CFR60.3 (a)

...the community shall:

(1) Require permits for all proposed construction or other development in the community...

44CFR59.1

Development means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures...

An aerial photograph showing a vast expanse of floodwater that has inundated a rural landscape. A long, narrow strip of land, possibly a road or a levee, runs vertically through the center of the frame, flanked by rows of trees. In the far distance, a city skyline is visible under a clear sky. The overall scene conveys the scale of a major flooding event.

Disaster Preparedness

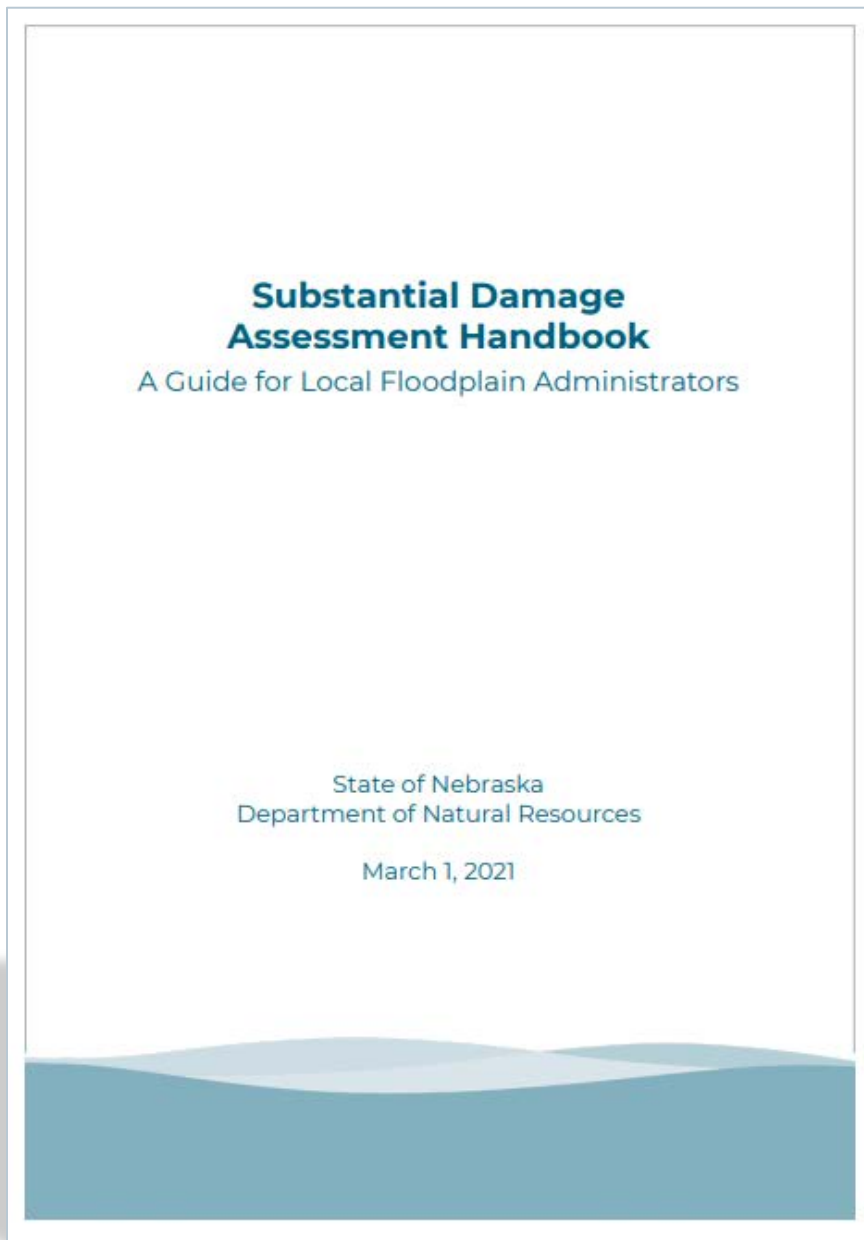
Known Hazards

- Floodplains are inherently hazardous places.
- Flooding is the most frequently reported hazard in Nebraska.
- In a 30 Year mortgage, a home has a 26% chance of experiencing a flood.
- Climate models show that NE is getting wetter, and
- Storm events will:
 - Increase in frequency
 - Increase in scale / intensity
 - Decrease in predictability

New Resource

Online at NeDNR's
"Digital Desk Reference"

[https://dnr.nebraska.gov/
floodplain/digital-desk-
reference](https://dnr.nebraska.gov/floodplain/digital-desk-reference)



<https://dnr.nebraska.gov/floodplain/digital-desk-reference>

ABOUT

DATA

FORMS

NEBRASKA
DEPT. OF NATURAL RESOURCES

SERVICES

CONTACT



Post-Disaster Information



▶ **Substantial Damage Assessment Handbook**



▶ **Substantial Damage Assessment Handbook:
Forms and Templates**

▶ **Other Publications**

▶ **FAQ & Other Helpful Information**

Past Articles by Topic for Floodplain

Substantial Damage Assessment

We will start with things that you can do anytime:


“Sunny Day” actions

Being prudent and *preparing prior to a disaster* is **wise**.

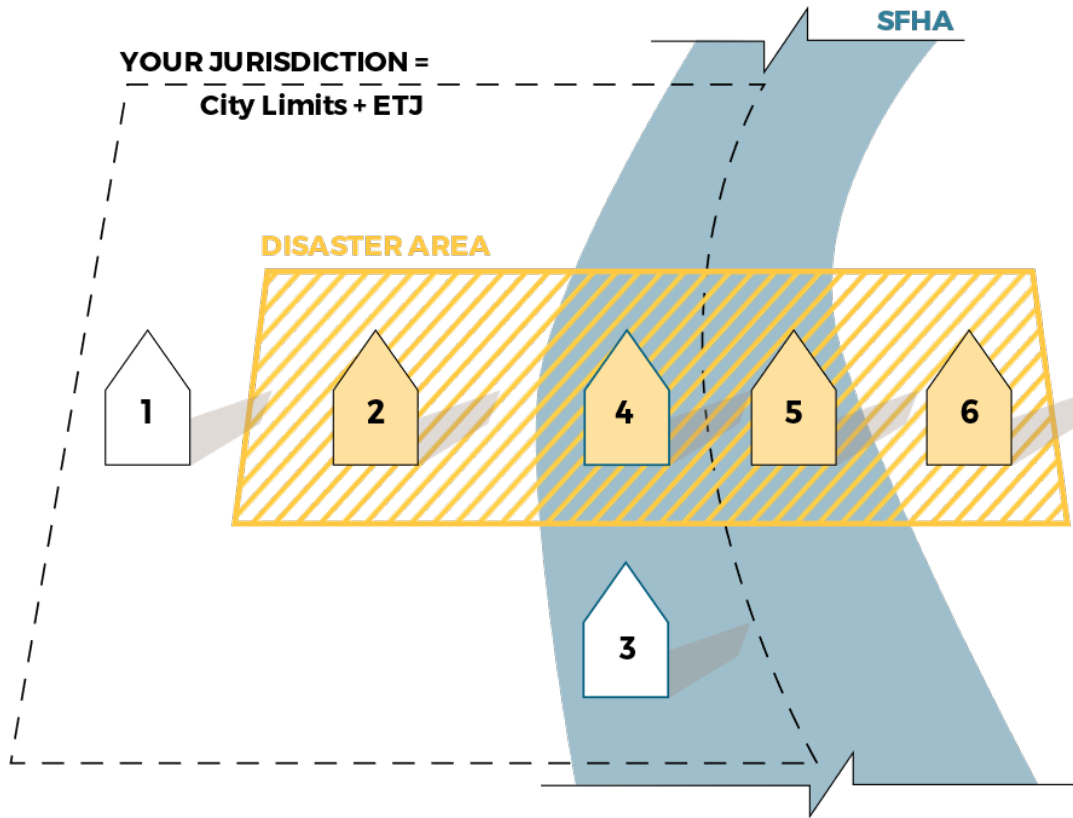
Your position as Floodplain Administrator is focused only on those properties within the floodplain, yet your duty as a community official may extend to all those affected by disaster. Today’s guidance pertains to **floodplains**.

Sunny Day Actions

Pre-Disaster Planning

- Knowing your regulatory jurisdiction
 - Knowing which structures are at risk
 - Building a database
 - Making a plan
- 

Know Your Jurisdiction



1. In jurisdiction, not impacted

Not under Floodplain Administrator purview; Handbook does not apply.

2. In jurisdiction, impacted, not in SFHA

3. In jurisdiction, not impacted, in SFHA

Handbook applies; use guidance in "Pre-Disaster" section.

4. In jurisdiction, impacted, in SFHA

This Handbook Applies. See the "SD Assessment and Permit Requirement Decision Tree."

5. Not in jurisdiction, impacted, in SFHA

Not under Floodplain Administrator purview; Handbook does not apply.

6. Not in jurisdiction, impacted, not in SFHA

Know Your Hazard Zones

Can you answer?

- Where is your jurisdiction's SFHA located?
- What structures exist in the SFHA?

Resources available:



- FIRM, FHBM
- NeDNR Interactive Map
- FEMA Flood Map Service Center (<https://msc.fema.gov/portal/home>)

Looking for a Flood Map? [?](#)

Enter an address, a place, or longitude/latitude coordinates:

Enter an address, a place, or longitude/latitude cc

Search

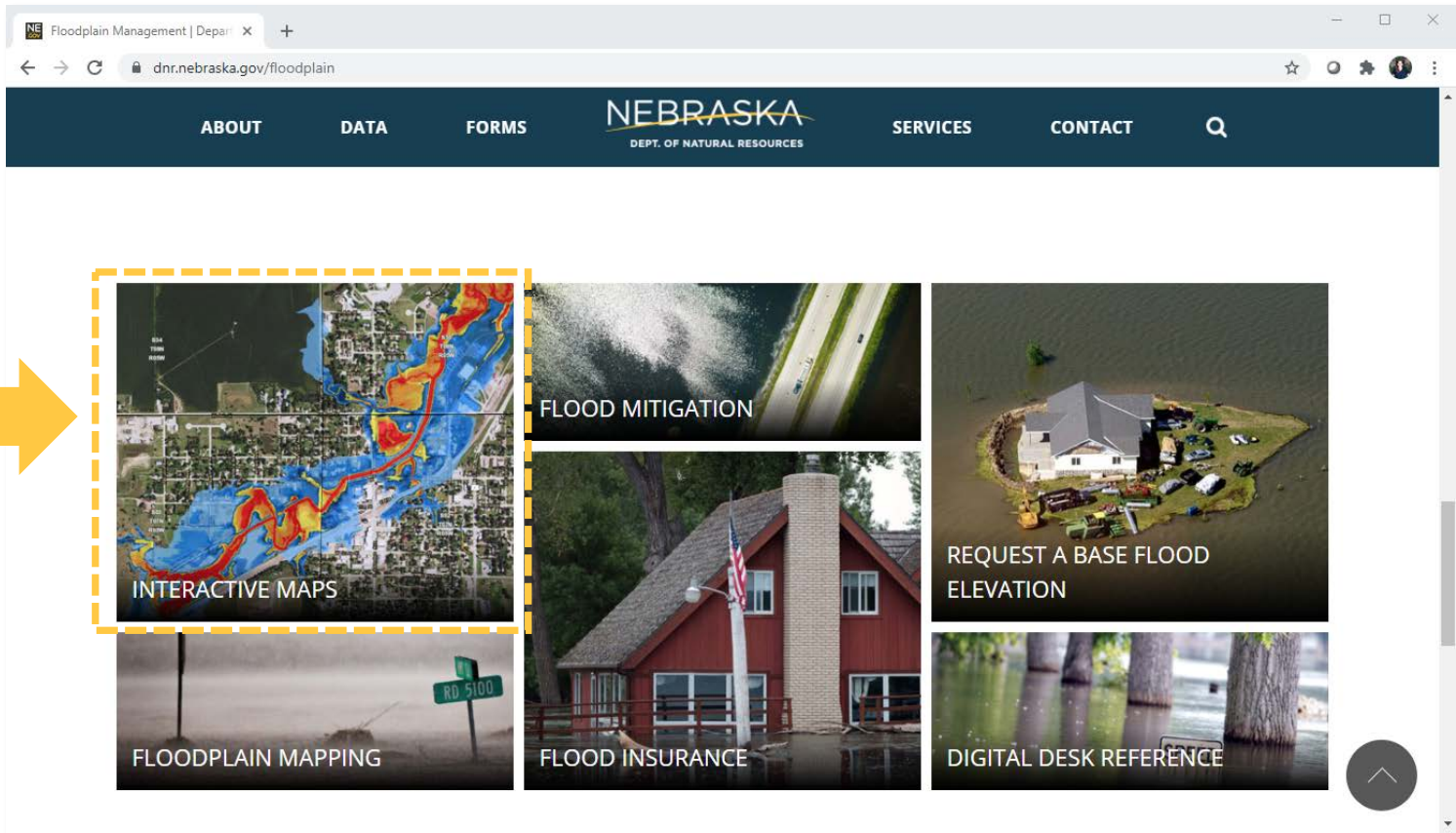
Looking for more than just a current flood map?

Visit [Search All Products](#) to access the full range of flood risk products for your community.



NeDNR Interactive Map

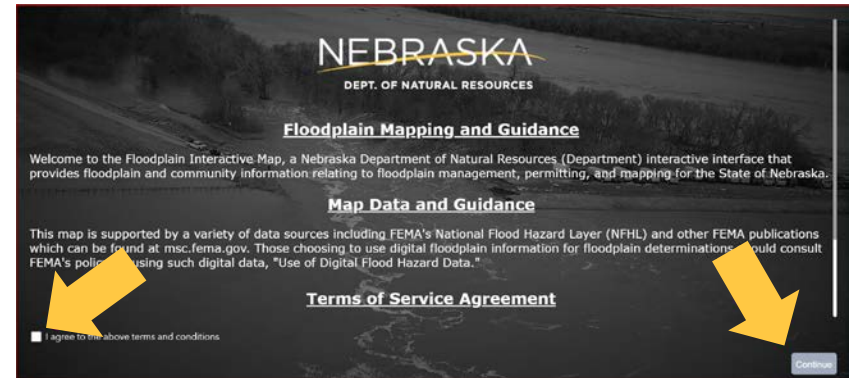
dnr.Nebraska.gov/floodplain



Floodplain Interactive Map

Agree and continue:

- Then give the map a minute to download.



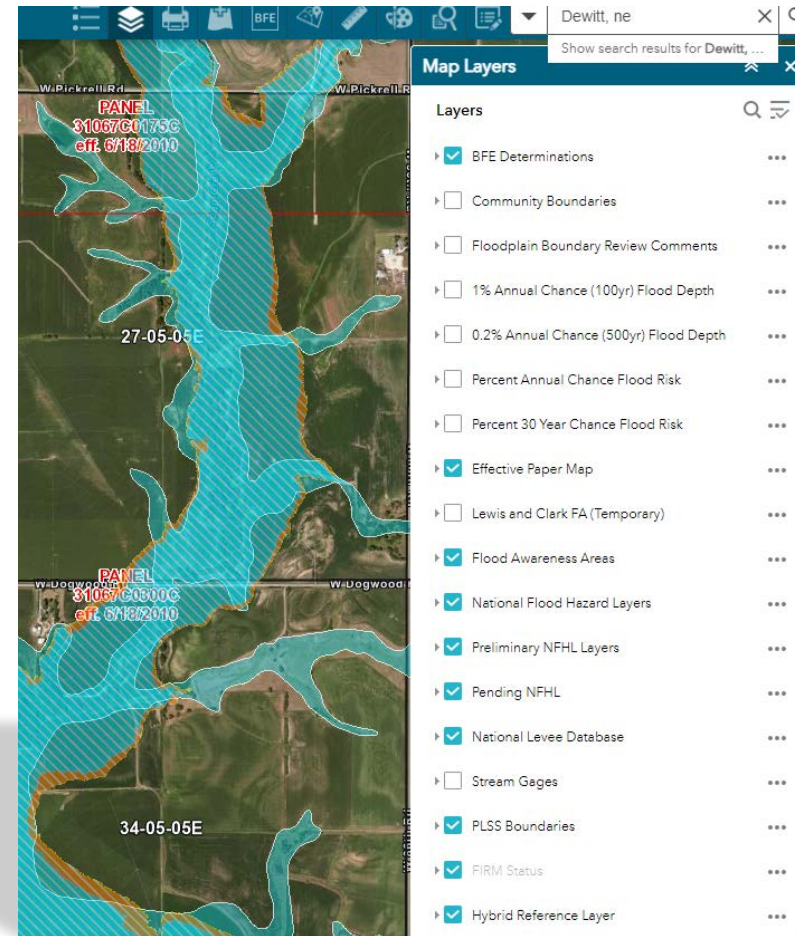
Zoom in to your jurisdiction:

- The roller on your mouse,
- The zoom button on the top left,
- By searching the address or section (S-T-R) in the search box in the upper right



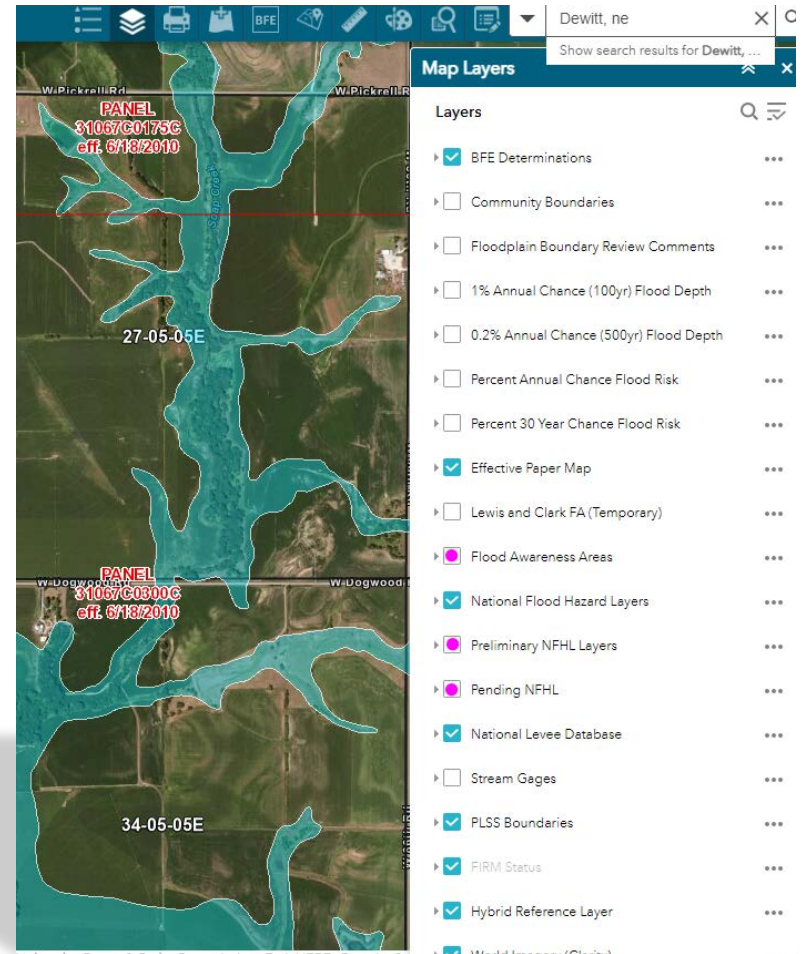
Too Many Layers?

- Layers can easily be turned off or on by checking or unchecking the box in the Layers Menu

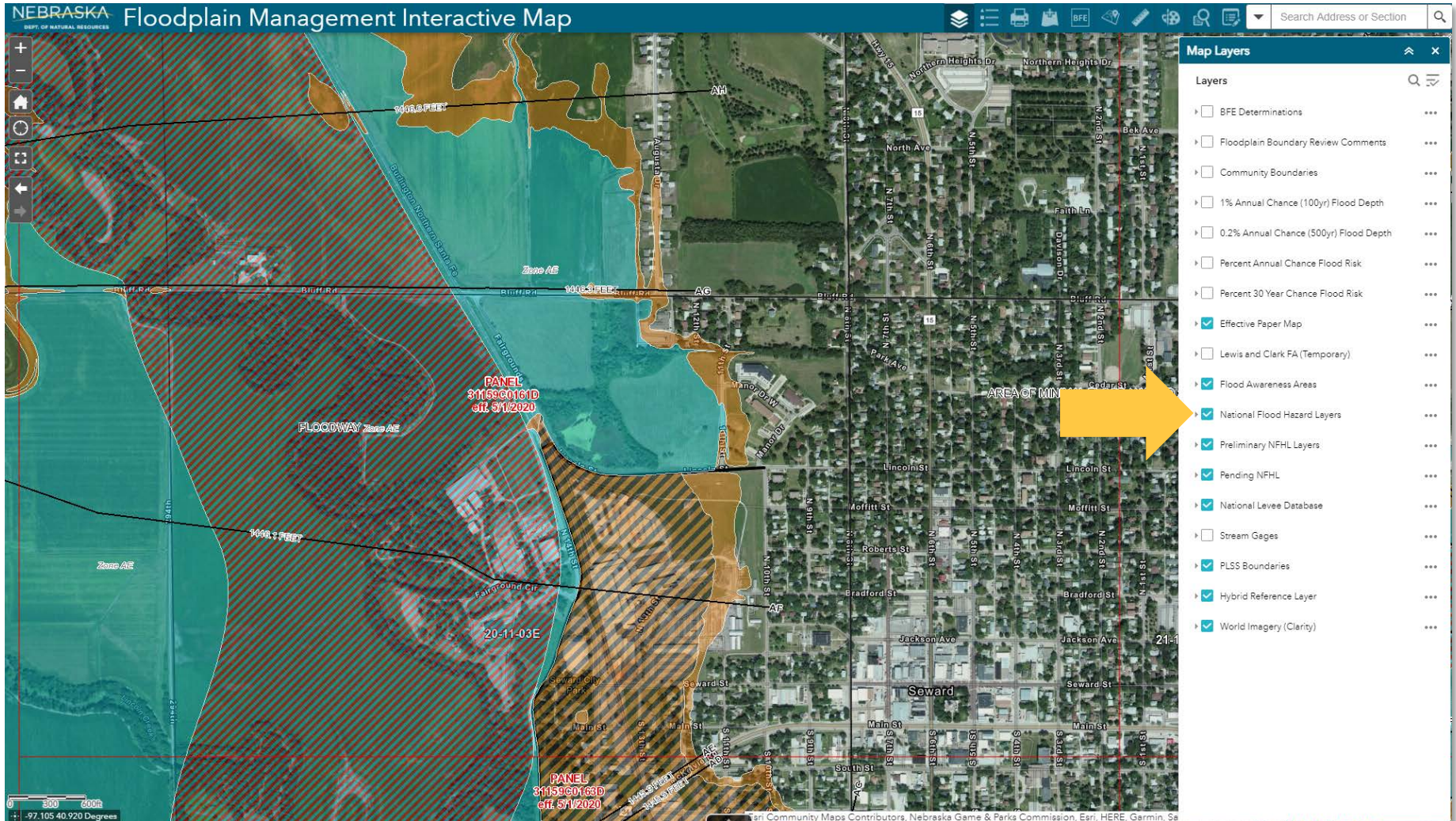


Regulatory Floodplain Only?

- To see **only** the regulatory FIRM and get rid of the confusing overlays, turn off these layers:
 - Flood Awareness Areas
 - Preliminary NFHL Layers
 - Pending NFHL

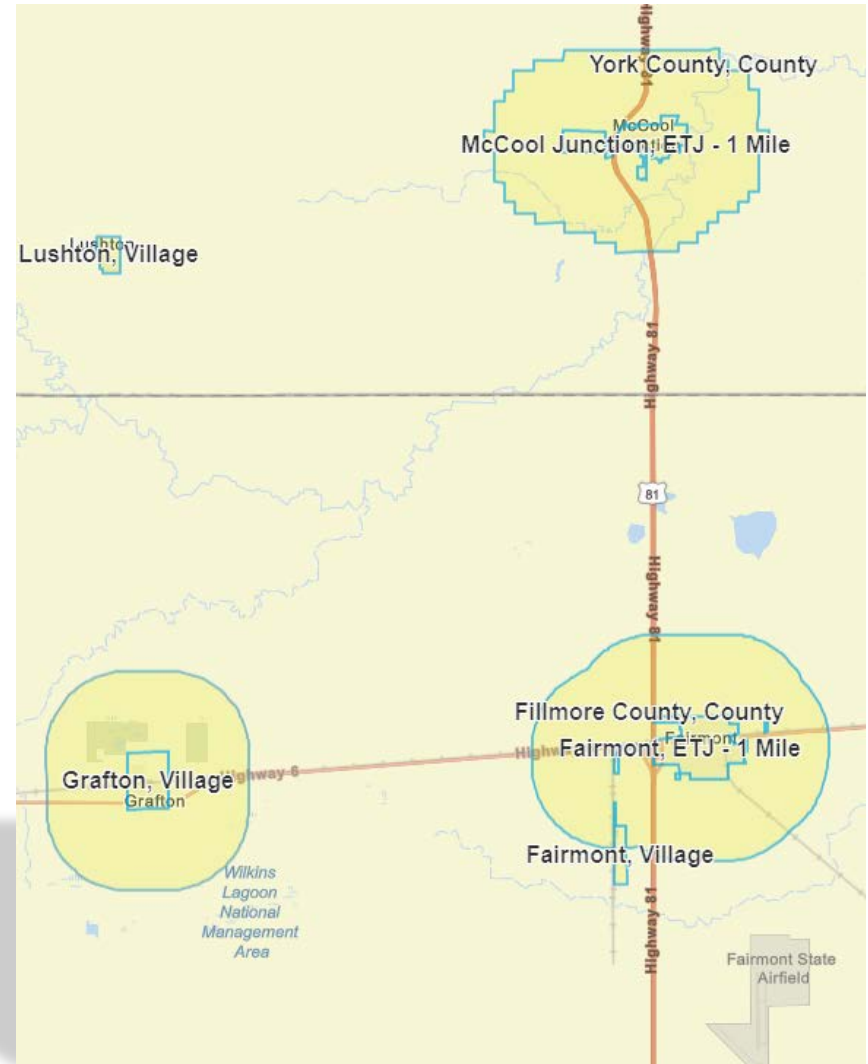


NFHL is Regulatory



Community Boundaries

- Some communities have a **1-mile Extra-Territorial Jurisdiction**, and some do not.
- Some ETJs are orthogonal, others are radial.



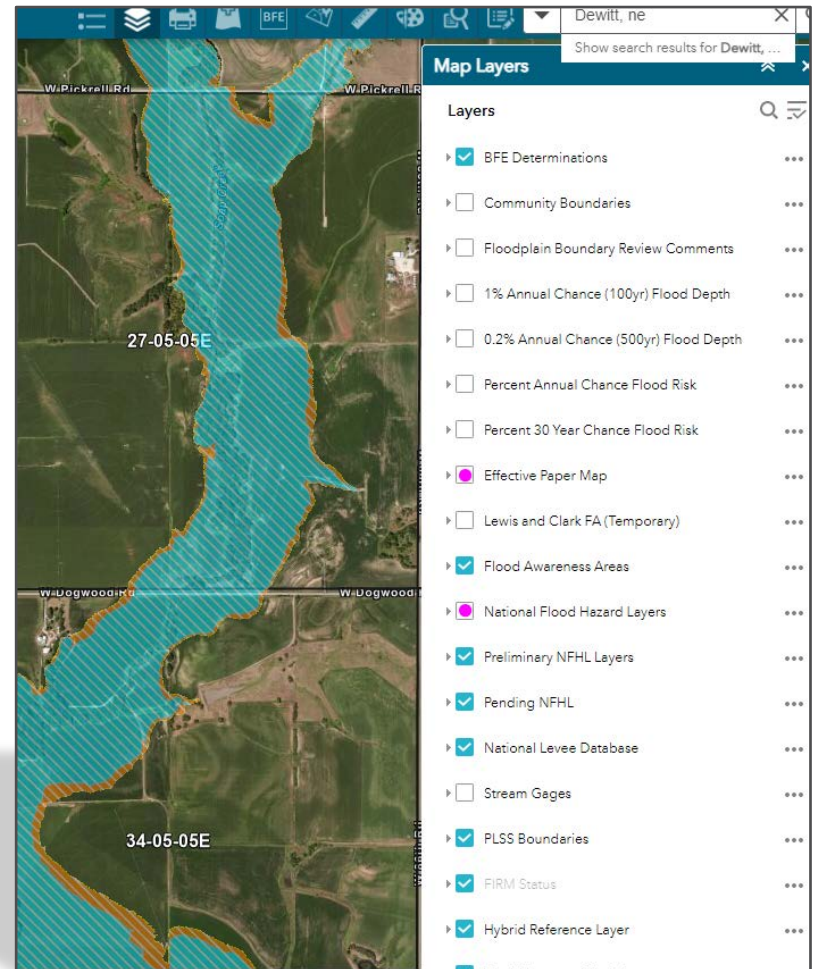
Find the Jurisdiction

- Sometimes an ETJ can extend beyond the county line.
- The house pictured in the floodplain is out in the country in Hall County... but is in the jurisdiction of Prosser in Adams County.

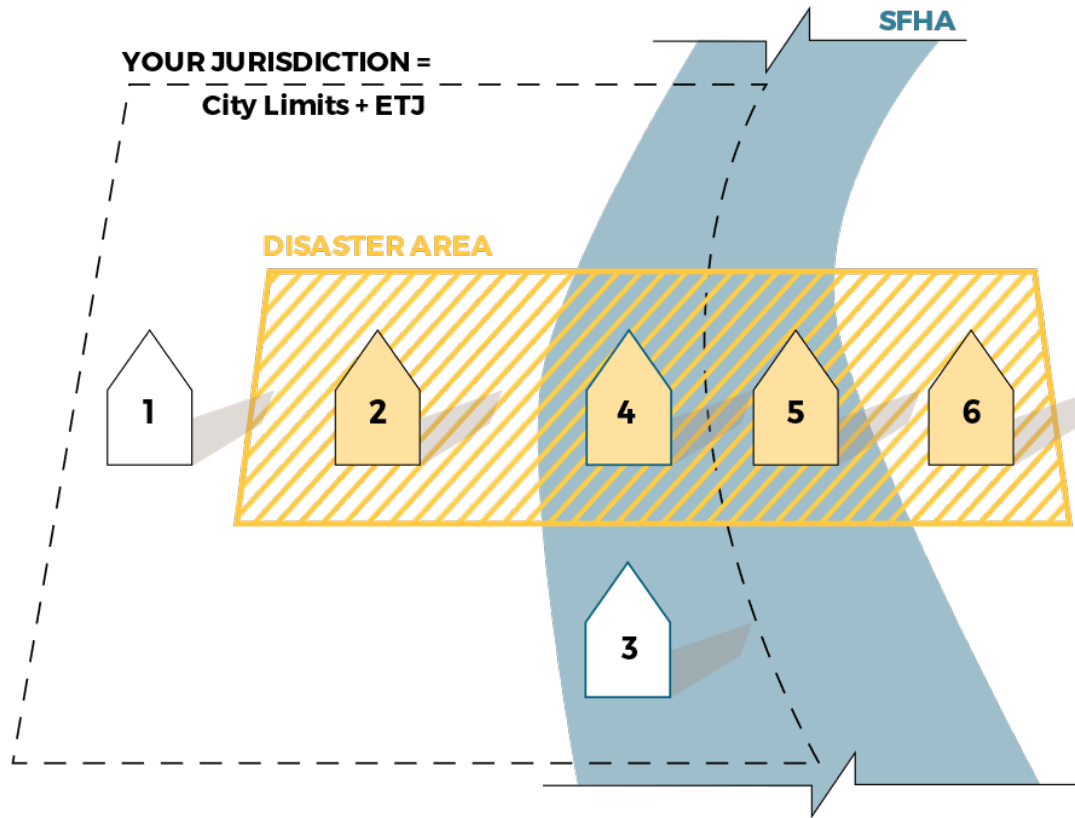


New Maps?

- To see the new maps or Best Available Data turn off either or both of these layers:
 - Effective Paper Map
 - National Flood Hazard Layer



Identify the Structures



1. In jurisdiction, not impacted
2. In jurisdiction, impacted, not in SFHA

Not under Floodplain Administrator purview; Handbook does not apply.

3. In jurisdiction, not impacted, in SFHA

Handbook applies; use guidance in "Pre-Disaster" section.

4. In jurisdiction, impacted, in SFHA

This Handbook Applies. See the "SD Assessment and Permit Requirement Decision Tree."

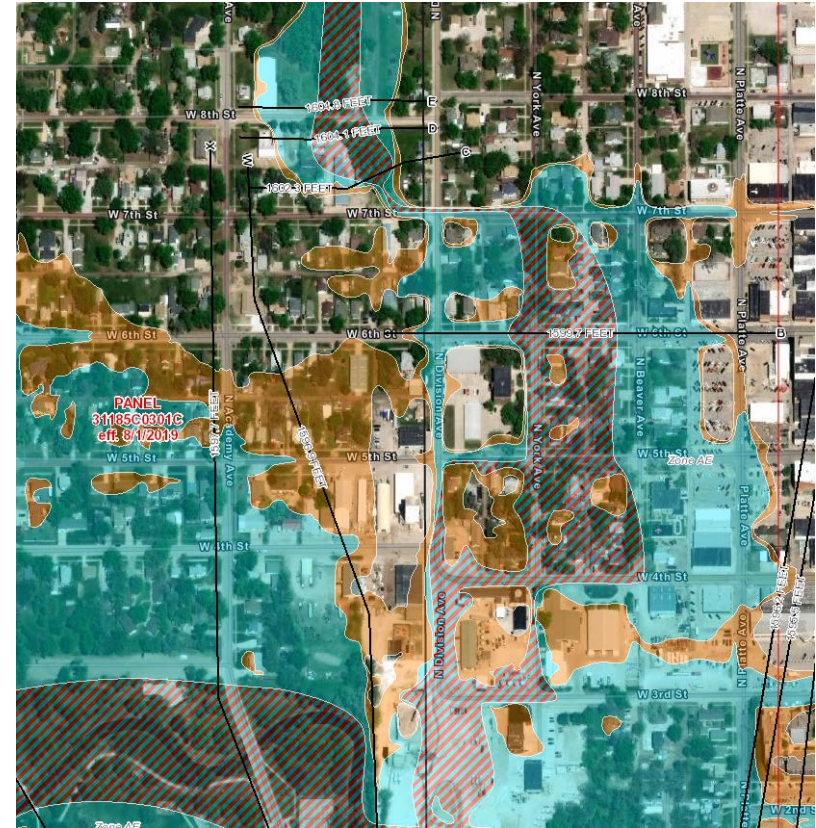
5. Not in jurisdiction, impacted, in SFHA

Not under Floodplain Administrator purview; Handbook does not apply.

6. Not in jurisdiction, impacted, not in SFHA

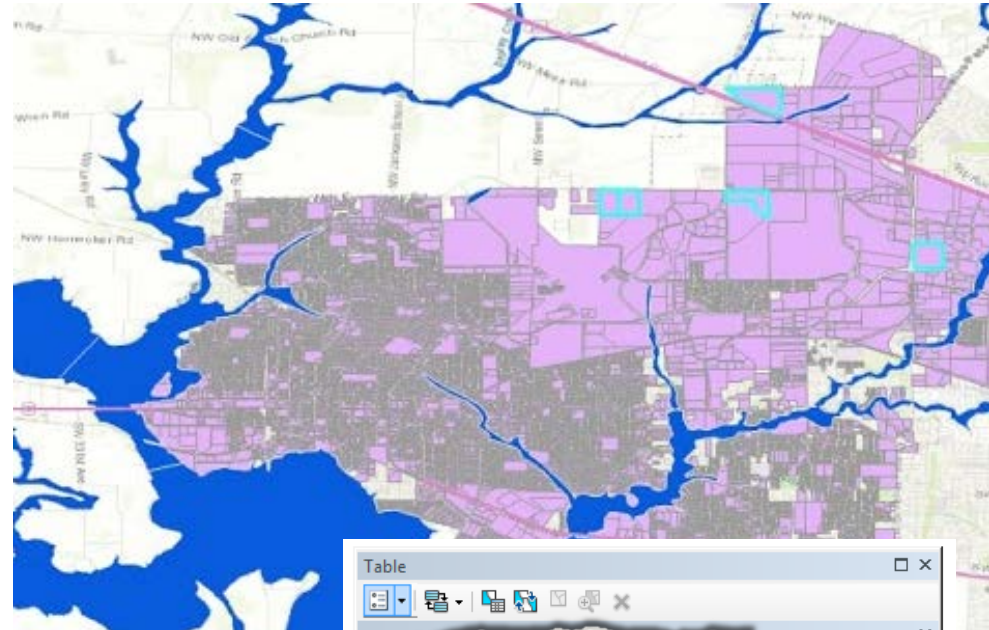
Identifying Floodplain Structures

- Before a disaster, take time to identify existing structures in the floodplain
- Create a **Property Record Inventory** or database of structures in the floodplain
- Use the **SDE 3.0** to create the database to ensure



GIS & Property Records

- If your county utilizes GIS consultant, they can provide a list of properties
- Simply fill out a work ticket
- Request properties in the 1% annual floodplain
- Provide a shapefile of your jurisdiction
- You may need to sort through to find which properties have *no structures* in the floodplain



Shape_Area
133945000000
0
294521000000
137046000000
408646000000
269621000000
527711
128892000000

Assessor Info: Owner

Much information can be gathered from the County Assessor's page:

- Owner's first and last name
- Owner's telephone number
- Community name (helpful if your jurisdiction is a county)
- Zip code
- Official structure address
- Owner's mailing address (if different from structure address)
- County name (for municipalities with jurisdiction covering multiple counties)
- Lot and parcel number

Assessor Info: Structure

The Assessor page also has a lot of information on the structure and its value.

- Date of construction
- Type and number of units on the property
- Habitable area (in square feet) per structure
- Structure use (a required field on the SDE 3.0 program)
- Number of stories
- Construction type (e.g., wood frame, masonry)
- Foundation type
- Exterior material type (e.g., vinyl siding, brick veneer)
- Attached or detached garage
- A picture of the structure or structures
- Adjusted tax assessed value of the structure

Creating a Post-Disaster Plan

- Meeting locations
- Staff members & responsibilities
- Emergency or critical routes
- Known stockpiles of emergency materials: fuel supplies, sandbags, generators, food banks.
- List of contacts: council members, neighboring jurisdictions, state agencies, mutual aid agreements (police, fire...)
- Plan for notifying the public and local officials
- List of info and where to find: permit files, tax records.
- Substantial damage assessment resources: SDA handbook, FEMA guides, and fieldwork tools.

Checklists

- You don't have to "think of everything" yourself!

Checklist 1 - Pre/Post Disaster Planning

Need	Complete	Item	Notes:
<p>Items 1-12 may all be completed prior to a disaster occurring. Do not attempt items 13 - 19 without first completing items 1 - 12.</p>			
<input type="checkbox"/>	<input type="checkbox"/>	<p>1. Brief all elected officials as soon as possible after the event regarding the NFIP requirements for Substantial Damage determinations. Source: FEMA P-758, <i>Substantial Improvement/Substantial Damage Desk Reference</i>, Chapter 7 (May 2010)</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>2. Select an SDE Manager. Source: FEMA P-784, <i>SDE User Manual and Workbook</i>, Section 7.1 (August 2017)</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>3. Review NFIP requirements for Substantial Damage and Substantial Improvement. Sources: NFIP Regulations; FEMA P-758, <i>Substantial Improvement/Substantial Damage Desk Reference</i> (May 2010); FEMA 213, <i>Answers to Questions About Substantially Damaged Buildings</i> (May 1991)</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>4. Review SDE tool and User Manual to understand the SDE data requirements. Sources: FEMA P-784, <i>SDE User Manual and Workbook</i>, Sections 3 and 4 (August 2017); FEMA SDE Best Practices (August 2017); FEMA Substantial Damage Estimator Tool Frequently Asked Questions</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>5. Identify Flood Insurance Rate Maps (FIRMs) or other floodplain maps to review the boundaries of the SFHA. Data may include FIRMs, FBFMs, FIS reports, community maps showing previously flooded areas, and flood studies by State or other Federal agencies. Source: FEMA P-784, <i>SDE User Manual and Workbook</i>, Section 8.1 (August 2017); Community NFIP coordinator</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>6. Identify type, location, and community contacts for tax or GIS data for structures within the SDE inventory area that are potentially Substantially Damaged. Any or all of the following data will be useful: owner name, building address, type of house, non-residential building use, year of construction, square footage, number of stories, adjusted building values, number of years since last tax adjustment, and dates of additions or renovations. Source: FEMA P-784, <i>SDE User Manual and Workbook</i>, Section 8.1 (August 2017)</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>7. Identify community street, address, or tax maps for delineating the boundaries of the SFHA. This will help delineate the maximum limits of the SDE inventory area while also showing addresses or lot locations. Source: FEMA P-784, <i>SDE User Manual and Workbook</i>, Section 7 (August 2017)</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>8. Transfer SFHA boundaries from floodplain map to a base map that includes streets, addresses, or a tax map. Using the effective FIRM for the community, transfer the SFHA boundaries to a base map with named streets and either addresses or lot boundary lines. This will delineate the maximum limits of the SDE inventory to narrow the focus of the inspections while avoiding areas outside the SFHA. Source: FEMA P-784, <i>SDE User Manual and Workbook</i>, Sections 8.1 and 9.3 (August 2017)</p>	

Checklists

- You don't have to "think of everything" yourself!

Checklist 2 - Field Preparations

	Need	Have	Item	Notes:
1.	<input type="checkbox"/>	<input type="checkbox"/>	Flood maps such as FIRMs, FIRMetts, clips of NeDNR Interactive Flood Maps, or other floodplain or flood risk maps.	
2.	<input type="checkbox"/>	<input type="checkbox"/>	Assessor's map or other address map with flood boundaries.	
3.	<input type="checkbox"/>	<input type="checkbox"/>	Route or area map showing proposed areas and sequence for data collection.	
4.	<input type="checkbox"/>	<input type="checkbox"/>	Tax data: structure owner name, structure address, mailing address, number of stories, and dimensions or habitable area.	
5.	<input type="checkbox"/>	<input type="checkbox"/>	Copies of blank SDE Damage Inspection Worksheets.	
6.	<input type="checkbox"/>	<input type="checkbox"/>	Copies of blank photo log sheets (if needed).	
7.	<input type="checkbox"/>	<input type="checkbox"/>	Photo ID badges for inspectors.	
8.	<input type="checkbox"/>	<input type="checkbox"/>	Letter of Introduction with community point of contact (name and telephone number).	
9.	<input type="checkbox"/>	<input type="checkbox"/>	Clip boards, pens/pencils, steno pad or notebook, highlighter.	
10.	<input type="checkbox"/>	<input type="checkbox"/>	100 ft tape measure (to obtain or verify structure dimensions).	
11.	<input type="checkbox"/>	<input type="checkbox"/>	Address board and dry erase markers.	
12.	<input type="checkbox"/>	<input type="checkbox"/>	Hard hat, gloves, safety glasses and vest, steel-toe and steel-shank shoes, safety vest, and flashlight.	
13.	<input type="checkbox"/>	<input type="checkbox"/>	Cell phones or walkie-talkies.	
14.	<input type="checkbox"/>	<input type="checkbox"/>	Digital camera, primary and alternate memory cards, and extra batteries.	
15.	<input type="checkbox"/>	<input type="checkbox"/>	Verification that police, fire, and emergency management agencies have been advised of SDE inspections.	
16.	<input type="checkbox"/>	<input type="checkbox"/>	Laptop computers or tablets with SDE tool installed and power cords with plug adaptors for use and re-charging in field vehicles.	
17.	<input type="checkbox"/>	<input type="checkbox"/>	Rain or cold-weather gear.	

An aerial photograph showing a vast expanse of floodwater that has inundated a rural area. A two-lane road runs vertically through the center of the image, with trees and some structures visible along its edges. In the far distance, a city skyline is visible under a clear sky. The text 'Post-Disaster: Substantial Damage Assessments' is overlaid in large, white, bold letters across the middle of the image.

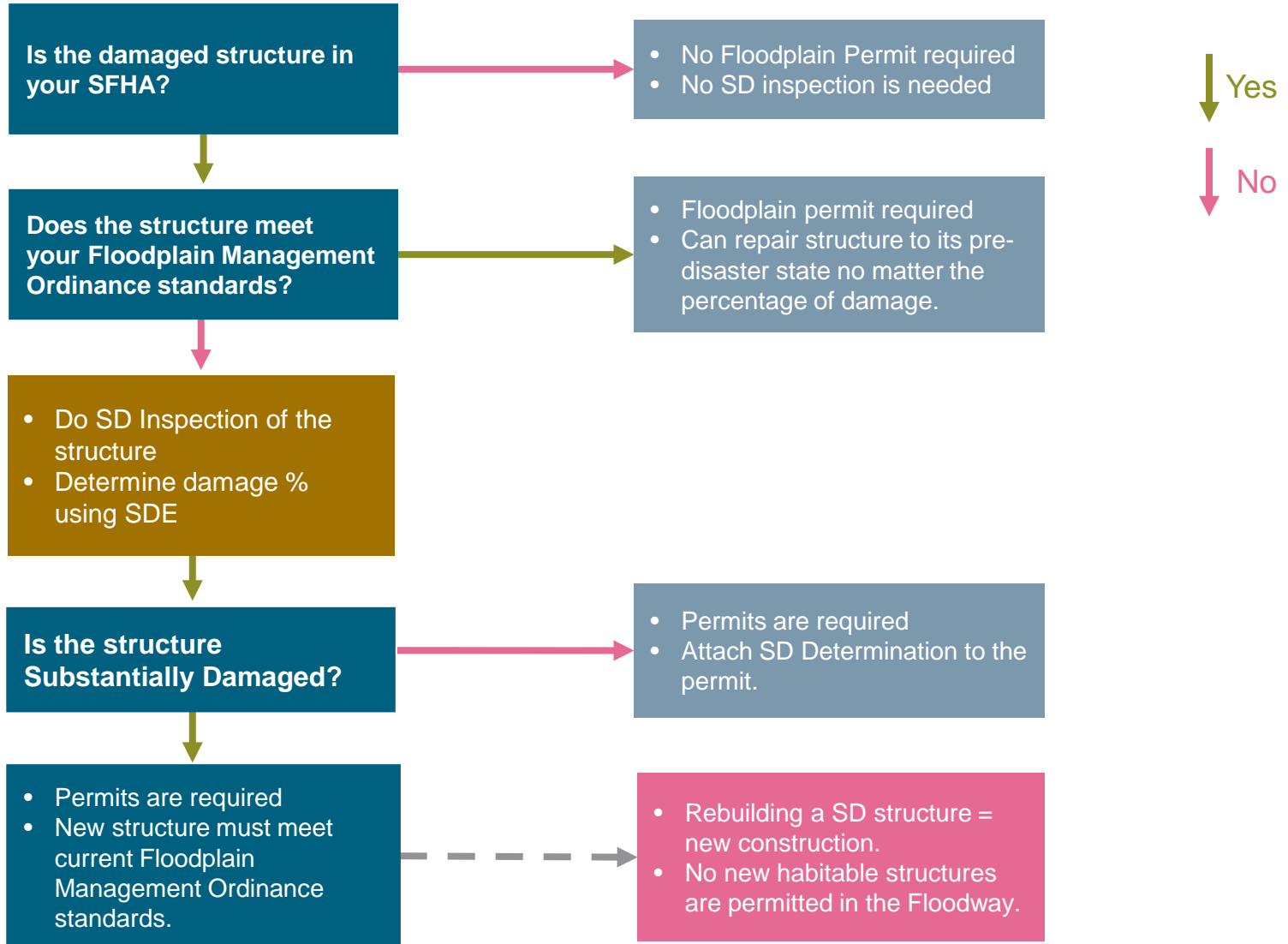
Post-Disaster: Substantial Damage Assessments

Post Disaster Duties

- Repairs to structures in the floodplain **constitute development and are subject to permit**
- If the structure is damaged **more than 50% of its value**, it needs to be brought into compliance with your floodplain ordinance
- A **Substantial Damage Assessment (SDA)** must be performed before repairs can be permitted



SDA Decision Tree



“Post-Disaster”: The SDA Process

Step 1: Office review and Prerequisite preparations

Step 2: Curbside Review

Step 3: Substantial Damage Inspections, comprising of:

- ✓ Developing the Substantial Damage Inspection schedule
- ✓ Notifying authorities of inspection plans
- ✓ Providing training for inspectors via pilot inspections
- ✓ Conducting substantial damage inspections

Step 4: Processing field data

Step 5: Review and issue Substantial Damage Determinations

Step 6: Floodplain Development Permits

“Post-Disaster”: The SDA Process

Step 1: Office review and Prerequisite preparations

Step 2: Curbside Review

S

NOTE: You may be reimbursed for time and expenses by FEMA Public Assistance if in a Federally Declared Disaster Area. So keep good records!

Step 4: Processing field data

Step 5: Review and issue Substantial Damage Determinations

Step 6: Floodplain Development Permits

1. Office Review & Prerequisites

Identify structures exempt from SDA:

- Areas of SFHA *not* impacted by the disaster.
- Damaged structures located *outside* of the SFHA.
- Structures in compliance with current floodplain ordinance.

1. Office Review & Prerequisites

Immediate Outreach is Key:

Community officials should be prepared to answer questions throughout the post-disaster recovery phase

Public needs to understand the recovery process.

- Connect with the Public Information Officer for social media platform
- Press releases to radio, newspaper, etc.

1. Office Review & Prerequisites

The Public:

Property owners, contractors, etc **need to know:**

- Structures need inspection before repair work starts.
- What activities require a permit.
- Substantial Damage requirement and compliance.
- Availability of Increased Cost of Compliance (ICC) coverage with NFIP flood insurance policies for SFHA structures.
- Caution about unlicensed contractors & fraudulent entities that may take advantage of disaster victims.
- Opportunity to implement mitigations not required by ordinance.
- **Consider sharing this info on an annual basis**

“Somebody Already Inspected My House”

A disaster event may trigger multiple forms of damage-scoping assessment:

- Rapid Needs Assessment
- Preliminary Damage Assessment
- Damage Assessment*
- Public Assistance Damage Assessment
- Substantial Damage Assessment*

2. The Curbside Review

- Drive through damaged areas of SFHA
 - Determine limits of disaster area
 - Draw disaster boundary on map
 - Number of structures
 - Structure types
 - Estimated levels of damage
 - ID health & safety issues

2. The Curbside Review

- Continued:
 - Note access issues
 - Depth of flooding above the first floor
 - Duration of flooding
 - Take photos to help prioritize field work back at the office

3. Substantial Damage Inspections

SD Inspections should *collect accurate data as quickly as possible* to complete an SD determination:

- A. Develop Substantial Damage Inspection schedule
- B. Notify Authorities of Inspection Plans
- C. Pilot Inspections
- D. Conduct Substantial Damage Inspections

3A. Develop a Substantial Damage Inspection Schedule:

Consider the following when determining which areas to **prioritize** for inspection:

- Areas with little to no apparent damage, allowing permits for minor repairs to be issued quickly
- Areas where debris and contents have been removed from the structures, allowing for faster inspections
- Areas with critical facilities that may be a community priority
- Areas with a high density of development and many structures
- Areas with temporary (debris) or permanent (gates) access issues

3B. Notify Authorities of Inspection Plans

Prior to SD Inspections:

- Issue a public announcements or press release
- Check in with the local fire, police, & EM on the purpose and timing of SD inspections
- Inspectors should carry personal ID and letters of introduction from local officials

3C. Pilot Inspections

Arrange for up to three pilot inspections for both residential and non-residential structures with various levels of damage.

- The purpose of the pilot inspections is to familiarize inspectors with the SDE data requirements, inspection procedures, and use of the SDE tool.
- Demonstrate the consistent field procedure for performing SDE
- Demonstrate the SDE tool to the inspectors
- These structures can be the first entries in the SDE inventory

3D. Conducting Substantial Damage Inspections

- Perform SDA with respect
- Have consistent procedure in all structures
- Maintain consistent, unbiased judgement
- Use the worksheets and guides in the Handbook to ensure consistency of inspection within your community

3D. Worksheets and Guides

Helpful Resources Include:

- Worksheet Templates
- Exterior Inspection Guide
- Interior Inspection Guide
- Percent Damage Estimation Tables

Substantial Damage Assessment Handbook: Forms and Templates

- 📄 Checklist 1 - Pre/Post Disaster Planning
- 📄 Checklist 2 - Field Preparations
- 📄 SDA Notice to Post on Structures
- 📄 Example Press Release
- 📄 NFIP and SD/SI Informational Handout
- 📄 Included and Excluded Costs for Damage Repair Estimates
- 📄 Right of Entry Certification and Release
- 📄 Exterior Inspection Guide
- 📄 Interior Inspection Guide
- 📄 Percent Damage Estimation Tables
- 📄 SDA Damage Inspection Worksheet - Residential
- 📄 SDA Damage Inspection Worksheet - Non Residential
- 📄 SDA and Permit Requirement Decision Tree
- 📄 SD Determination Letter - Flood-Related Damage
- 📄 SD Determination Letter - Not Flood-Related
- 📄 Non-SD Determination Letter



Post-Disaster Information

▶ Substantial Damage Assessment Handbook



▶ Substantial Damage Assessment Handbook:
Forms and Templates

▶ Other Publications

▶ FAQ & Other Helpful Information

Past Articles by Topic for Floodplain

An aerial photograph showing a wide expanse of floodwater. A road, likely a levee or causeway, runs vertically through the center of the image, flanked by rows of trees. The water is a deep blue-grey color, and the sky is a pale, hazy blue. In the far distance, a city skyline is visible on the right side. The text 'Exercise: Curbside Review' is overlaid in large, white, bold letters with a slight drop shadow.

Exercise: Curbside Review



















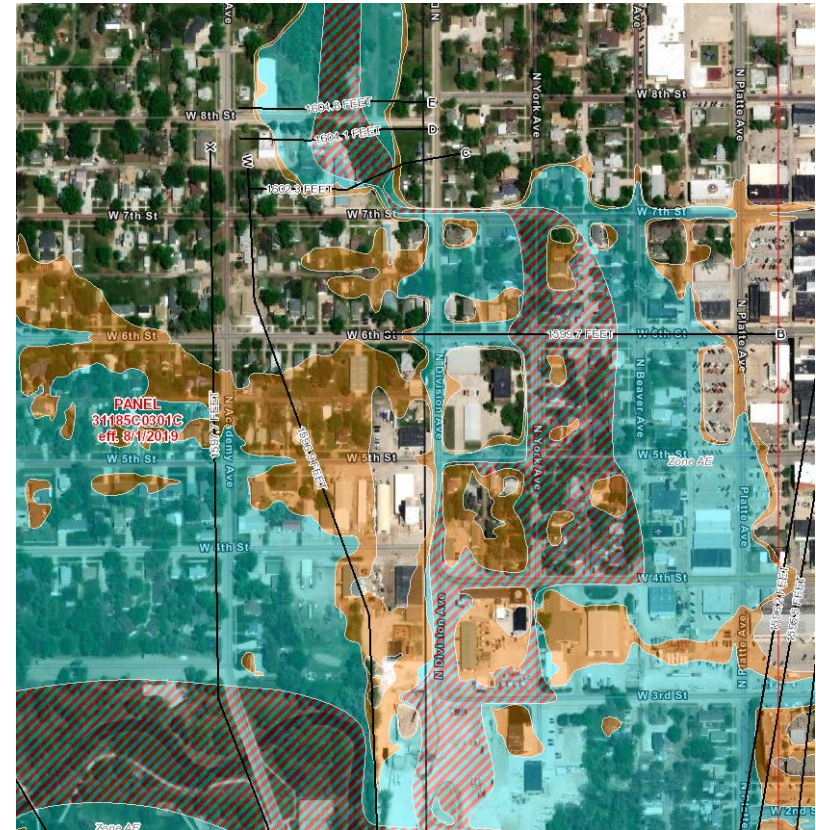


An aerial photograph showing a vast expanse of floodwater that has inundated a large area of land. A long, narrow strip of land, possibly a road or a levee, runs vertically through the center of the image, cutting through the water. The water is a deep blue-grey color, and the sky is a pale, hazy blue. In the distance, a city skyline is visible on the right side. The overall scene depicts a significant flooding event.

Exercise: SDE 3.0 Tool

Creating a Database

- Before a disaster, take time to identify existing structures in the floodplain
- Create a **Property Record Inventory** or database of structures in the floodplain
- Use the **SDE 3.0** to create the database to ensure



Estimated Percentage Damage Range

	0% - 25%	25% - 50%	50% - 75%	75% - 100%	
FOUNDATION	<p>Continuous perimeter foundations, footings, and piers for internal beams and floor loads. Footing depth averages between 30 inches and 42 inches below ground level. Materials include unreinforced cast-in-place concrete, unreinforced masonry or concrete masonry units (CMUs), concrete slab on grade, or raised slab construction.</p>	<ul style="list-style-type: none"> • Water level does not rise to the level of the bottom of the first floor of the structure. • No scouring at the footings. • Some undermining but no visible cracking at concrete slab. 	<ul style="list-style-type: none"> • Water level rises just above first floor level. • Limited scouring at the footings. • Soils are saturated. • Undermining of the concrete slab, especially at corners - hairline cracks only. 	<ul style="list-style-type: none"> • Water level is 4-7 feet against the outside of the building. • Limited scouring at the footings. • Soils are saturated and unstable. • Cracks noted on or along the foundation walls. • Significant undermining of the concrete slab – significant cracking is visible. 	<ul style="list-style-type: none"> • Water level is 7 feet or higher against the outside of the building. • Limited scouring at the footings. • Foundation is notably cracked and/or displaced. Structure has been knocked off its foundation. • Portions of the foundation are damaged or missing. • Significant undermining of the concrete slab - major cracking and separation of the concrete slab.
SUPERSTRUCTURE	<p>For wood frame & masonry. The wall support systems that extend from the foundation wall to the roof structure. Superstructures include the exterior wall sheathing panels, shear panels, or braced wall panels. This section also includes structural members that support the roof (rafters and trusses), but does not include the roof sheathing.</p>	<ul style="list-style-type: none"> • Water level does not rise to the level of the bottom of the first floor of the structure. • No damage to the roof framing. 	<ul style="list-style-type: none"> • Water level rises just above first floor level. • Damage to the exterior walls is limited. • Damage to the roof framing is limited. 	<ul style="list-style-type: none"> • Water level is up to 3 feet high on the first floor level. • Some damage to exterior walls. • Significant damage to sections of the roof framing. 	<ul style="list-style-type: none"> • Water is over 3 feet high on the first floor level of the house. • Significant damage to exterior walls. • Significant damage to the main portion or multiple sections of the roof framing.

**SDA Damage Inspection Worksheet
- Residential -**

COMMUNITY	STRUCTURE	INSPECTION
NFIP Community ID (CID):	Structure Address:	Inspector Name:
NFIP Community Name:		Team #:
Latitude:	City:	Assessment Date:
Longitude:	Zip:	Date Damaged:
	County:	

PHOTOS

Photo #: *Direction facing:* Northwest North Northeast East
 West Southwest South Southeast

Photo #: Northwest North Northeast East
 West Southwest South Southeast

STRUCTURE ATTRIBUTES Year Constructed:

Residence Type: Single Family Residence Town or Row House Manufactured House

Exterior: One Story Two or More Stories

Foundation: Continuous Wall + Slab Piles Basement Slab-on-Grade Crawlspace Piers and Posts

Superstructure: Stud-Framed Common Brick ICF Masonry

Roof Coverings: Shingles Clay Tile Standing Seam (Metal) Slate

Exterior Finish: Siding or Stucco Brick Veneer Exterior Insulated Finishing System (EIFS) None (Common Brick or Structural)

HVAC System: None Heating or Cooling

Quality: Low Good Budget Excellent Average

Cause of Damage: Fire Flood Flood and Wind Seismic Wind Other

Flood Duration: Hours Days

Flood Depth Above Ground: **Flood Depth Above 1st Floor:**
(Decimal Ft.) (Decimal Ft.)

**SDA Damage Inspection Worksheet Cont.
- Residential -**

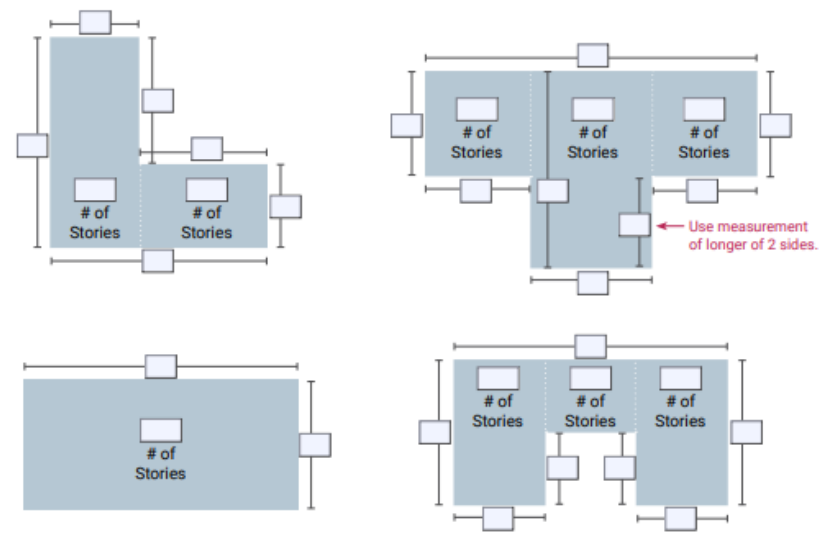
DEPRECIATION RATING

Very Poor Condition Average Condition Other:
 Requires Extensive Repairs Above Average Condition
 Requires Some Repairs Excellent Condition

ELEMENT PERCENTAGES

Element	Percent Damaged	Element	Percent Damaged
Foundation:	<input type="text"/>	Floor Finish:	<input type="text"/>
Superstructure:	<input type="text"/>	Plumbing:	<input type="text"/>
Roof Covering:	<input type="text"/>	Electrical:	<input type="text"/>
Exterior Finish:	<input type="text"/>	Appliances:	<input type="text"/>
Doors & Windows:	<input type="text"/>	Interior Finish:	<input type="text"/>
Cabinets & Countertops:	<input type="text"/>	HVAC:	<input type="text"/>

SQ. FOOTAGE CALCULATOR







An aerial photograph showing a vast expanse of floodwater that has inundated a rural landscape. A long, straight road or levee runs through the center of the image, flanked by rows of trees. In the far distance, a city skyline is visible under a clear sky. The water is a deep blue-grey color, and the overall scene conveys the scale of the flooding.

SI & Additional Considerations

Substantial Improvement

Title 455, Nebraska Administrative Code, Chapter 1 §002.22:

“Substantial improvement” shall mean any reconstruction, rehabilitation, addition, or other improvement of an obstruction, the cost of which equals or exceeds 50 percent of the market value of the obstruction before “start of construction” of the improvement. This includes obstructions which have incurred “substantial damage,” regardless of the actual repair work performed.

Substantial Improvement

- Improvements are often made at time of damage repair, or shortly after
- Damage value needs to be incorporated, even if property owner elects not to repair all
- Look out for ‘phased improvement’ or ‘consecutive permits’

SI/SD: What Costs to Include?

Costs for Substantial Improvements and Repair of Substantial Damage

Included Costs

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- Structural elements and exterior finishes, including:
 - Foundations (e.g., spread or continuous foundation footings, perimeter walls, chainwalls, pilings, columns, posts, etc.)
 - Monolithic or other types of concrete slabs
 - Bearing walls, tie beams, trusses
 - Joists, beams, subflooring, framing, ceilings
 - Interior non-bearing walls
 - Exterior finishes (e.g., brick, stucco, siding, painting, and trim)
- Structural elements and exterior finishes (cont.):
 - Windows and exterior doors
 - Roofing, gutters, and downspouts
 - Hardware
 - Attached decks and porches
- Interior finish elements, including:
 - Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
 - Bathroom tiling and fixtures
 - Wall finishes (e.g., drywall, paint, stucco, plaster, paneling, and marble)
 - Built-in cabinets (e.g., kitchen, utility, entertainment, storage, and bathroom)
 - Interior doors
 - Interior finish carpentry
 - Built-in bookcases and furniture
 - Hardware
 - Insulation
- Utility and service equipment, including:
 - HVAC equipment
 - Plumbing fixtures and piping
 - Electrical wiring, outlets, and switches
 - Light fixtures and ceiling fans
 - Security systems
 - Built-in appliances
 - Central vacuum systems
 - Water filtration, conditioning, and recirculation systems

Record Keeping

Necessary documents and permit records:


- Development permit + all attachments (site plans)
- SD determination + supporting docs
- Building inspection records
- Engineered openings design documents
- Evidence historic structures will maintain status
- Variance proceedings
- Elevation certificate (before occupancy certificate)

Substantial Damage Estimator

Subdivision		Community	
Subdivision	Ev. of Lowest Floor	NFIP Community Name	Village of Malcolm
Parcel #	ft.	NFIP Community ID#	310500
Lot #	Datum	Latitude	Longitude

Structure Address

Owner's Name	Smith, Bill
Street Address	210 3rd Avenue
City	Malcolm
County/Parish	Lancaster
State	Nebraska
Zip	68402
Phone	



Structure Information

Year of Construction	
Residence Type	Single Family Residence
Quality	

Damage Information

Date of Assessment	03/08/2021	Date of Damage	03/08/2021	Residence Information
Inspector Name		Cause of Damage		
Inspector Phone		Duration of Flood	0	
		Est. Depth of Flood Above Lowest Floor		

NFIP Information

Firm Panel #	Suffix	Date of FIRM Panel	Firm Zone	BFE	Regulatory Floodway
		03/05/2021			

Percent Damaged

• Basis for Value of Structure	• Percent Damaged	• Basis for Cost of Repairs
\$274,775.00	37.4 %	\$102,859.38
Computed Actual Cash Value	Not Substantially Damaged	Computed Damages

Damage Summary

Replacement Cost	\$362,500.00	Computed Damages	\$102,859.38
Depreciation %	24.2 %	Percent of Existing Improvements and Repairs Pre-Disaster	0.0 %
Computed Actual Cash Value*	\$274,775.00	Repair/Reconstruction %	37.4 %
		Other Depreciation Explanation	

* Per FEMA Publication 213, Actual Cash Value may be used as Market Value.


Optional User Entered Data

Professional Market Appraisal	\$0.00	Contractor Estimate	\$0.00
Tax Assessed Value	\$0.00		
Factor Adjustment	0	Community Estimate	\$0.00
Adjusted Tax Assessed Value	\$0.00		

• Authorized Local Official: _____ Signature Authorized Local Official: _____ Printed Name

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Additional Handbook Items:

- Field Data Processing Tips, p. 27-28
 - Determination Letters, p. 29 & Appendix
 - Determination Integrity Tips, p. 30
 - Permitting Considerations, p. 31
 - Infrastructure Repairs, p. 32
 - Violations, p. 32
 - Site Inspections, p. 33
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SI/SD Resources



Substantial Improvement/ Substantial Damage Desk Reference

FEMA P-758 / May 2010



Answers to Questions About Substantially Improved/ Substantially Damaged Buildings

FEMA 213 / August 2018



SDE 3.0 Resources



Substantial Damage Estimator (SDE) User Manual and Field Workbook

Using the SDE Tool to Perform Substantial Damage Determinations

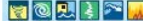
FEMA P-784 / Tool Version 3.0 / August 2017



FEMA

Substantial Damage Estimator

The SDE is a tool to help local officials administer the Substantial Damage requirements of their floodplain management ordinances in keeping with the minimum requirements of the NFIP.



Substantial Damage Estimator Best Practices

Approaches for Using FEMA's Substantial Damage Estimator Tool

Prepared for:



Federal Emergency Management Agency
500 C Street, SW
Washington, D.C. 20472

August 2017



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