Flood Preparedness **Substantial Damage** Assessments



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, 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.

Post Disaster Duties

- Repairs to structures in the floodplain must be permitted
- If the structure is damaged more than 50% of it's 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 <u>development</u> in the community...

44CFR59.1

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

Presenters

Chuck Chase, CFM
Outreach Coordinator
chuck.chase@nebraska.gov
(402) 471–9422



Adele Phillips, CFM
Flood Mitigation Planner
adele.phillips@nebraska.gov
(402) 471–9252





Known Hazards

- Floodplains are inherently hazardous places.
- Flooding is the most frequently reported hazard in Nebraska.
- In a 30 Year mortgage, a home has 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

Substantial Damage Assessment Handbook

A Guide for Local Floodplain Administrators

State of Nebraska Department of Natural Resources

March 1, 2021



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

ABOUT DATA **FORMS** 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 Tonic for Floodplain



Substantial Damage Assessment

We will start by discussing things that you can do anytime: "Sunny Day" actions

Yet, prudence would dictate that preparing prior to a disaster is a **wisdom**.

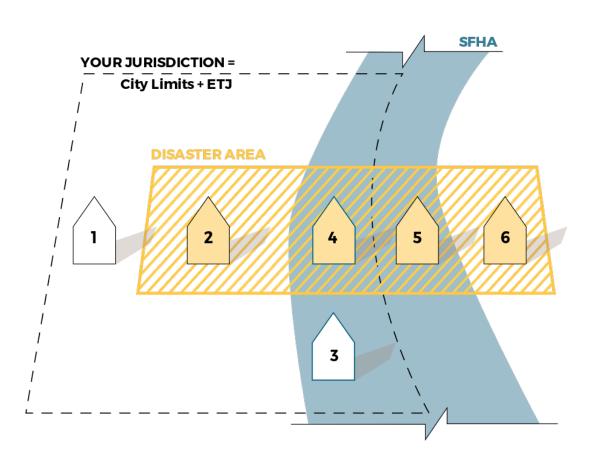
Your position as Floodplain Administrator focused only on those properties within the floodplain, yet your duty as a community official may extend to all those affected by disaster.

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
- 2. In jurisdiction, impacted, not in SFHA
- In jurisdiction, not impacted, in SFHA
- In jurisdiction, impacted, in SFHA
- Not in jurisdiction, impacted, in SFHA
- Not in jurisdiction, impacted, not in SFHA

Not under Floodplain Administrator purview; Handbook does not apply.

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

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

Not under Floodplain Administrator purview; Handbook does not apply.

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?

Output

Description:

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

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



Search



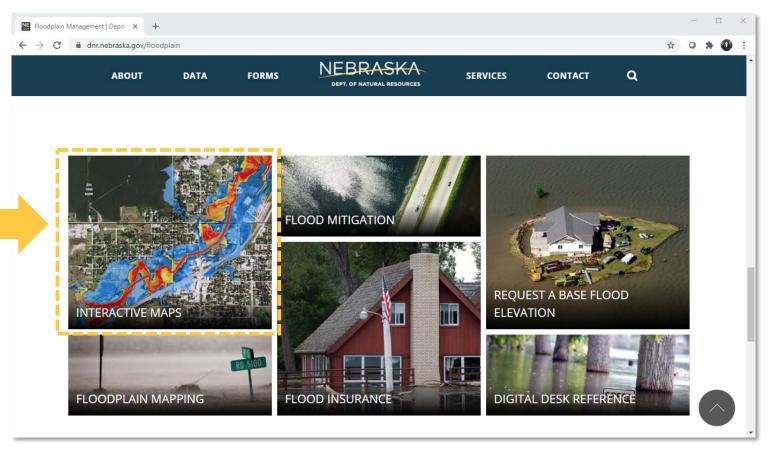
Looking for more than just a current flood map?

Visit Search All Products to access the full range of flood risk products for your community.



NeDNR Interactive Map

dnr.Nebraska.gov/floodplain





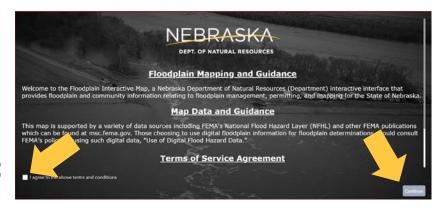
Floodplain Interactive Map

Agree and continue:

 Then give the map a minute to download.

Zoom in to your property using:

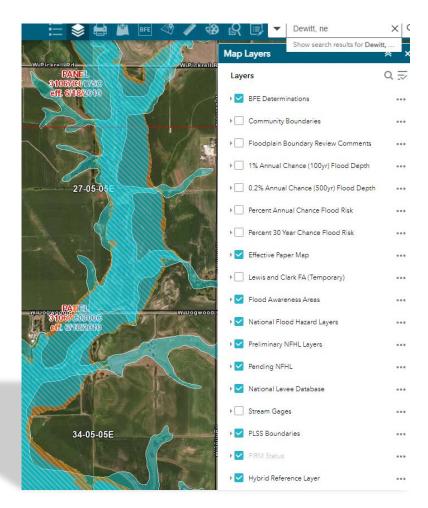
- The roller on your mouse,
- The zoom button on the top left, or
- By searching the address or section (S-T-R) in the search box in the upper right





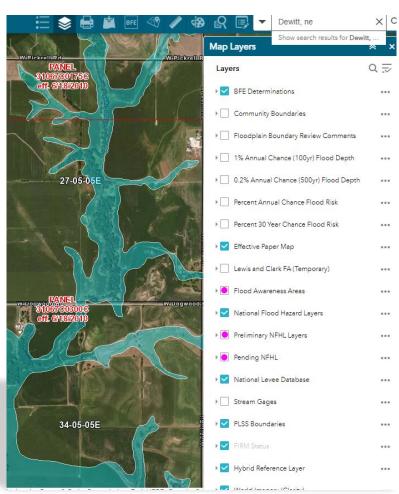
Too Many Layers?

- Sometimes there can be too much information shown on the Map
- Layers can easily be turned off or on by checking or unchecking the box in the Layers Menu

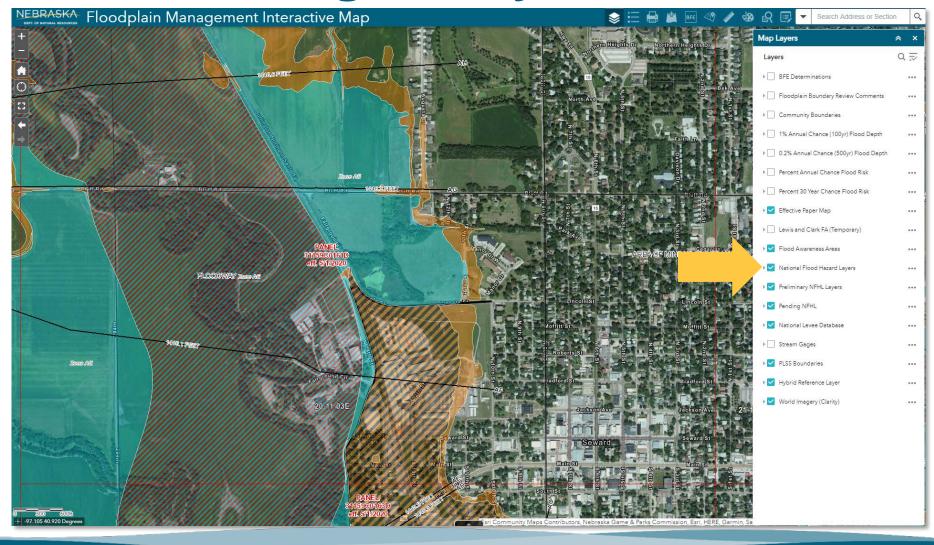


Regulatory Floodplain Only?

- 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

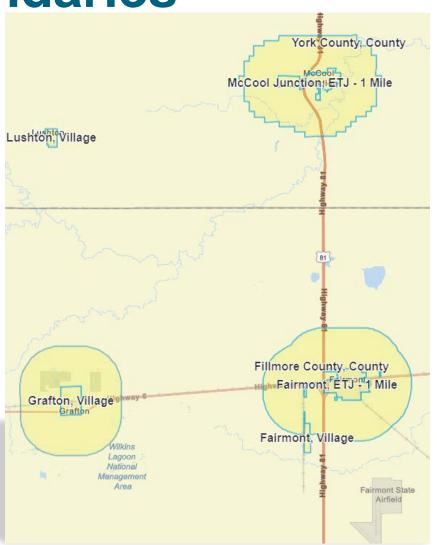


NFHL is Regulatory



Community Boundaries

- Some communities have a 1-mile Extra-Territorial Jurisdiction, and some do not.
- Some ETJs follow property lines; others just extend as far as possible (creating a curved boundary).



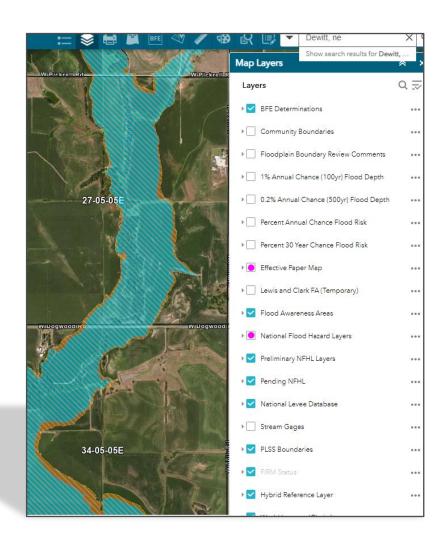
Find the Jurisdiction

- 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 <u>jurisdiction</u> of Prosser in Adams County.

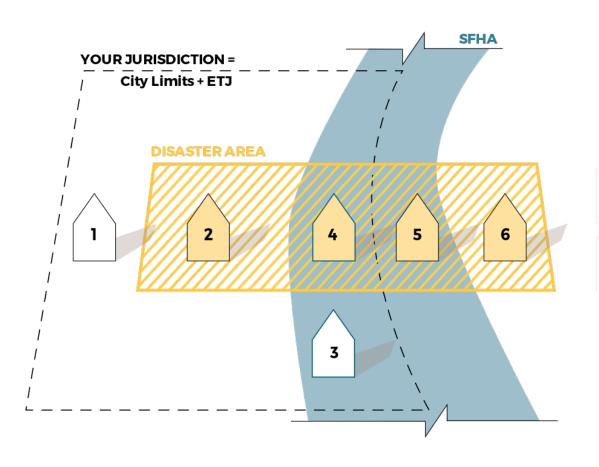


New Maps?

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



Know Your Jurisdiction



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- 2. In jurisdiction, impacted, not in SFHA
- 3. In jurisdiction, not impacted, in SFHA
- 4. In jurisdiction, impacted, in SFHA
- Not in jurisdiction, impacted, in SFHA
- Not in jurisdiction, impacted, not in SFHA

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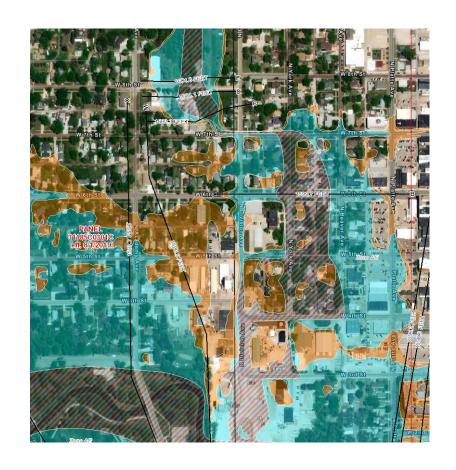
Handbook applies; use guidance in "Pre-Disaster" section.

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

Not under Floodplain Administrator purview; Handbook does not apply.

Identify the Structures in the Floodplain

- Before a disaster, you can take the 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



Assessors GIS Workshop

- If your county utilizes GIS
 Workshop, 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 if gWorks does not already have it
- You may need to sort through to find which properties have no structures in the floodplain



SDE-3.0 Creating a Property Record Inventory

- Free software from FEMA for performing Substantial Damage Assessments
- Also good for creating a
 Property Record Inventory
 or database of properties
 with structures in the
 floodplain
- Stand alone software, not on a cloud



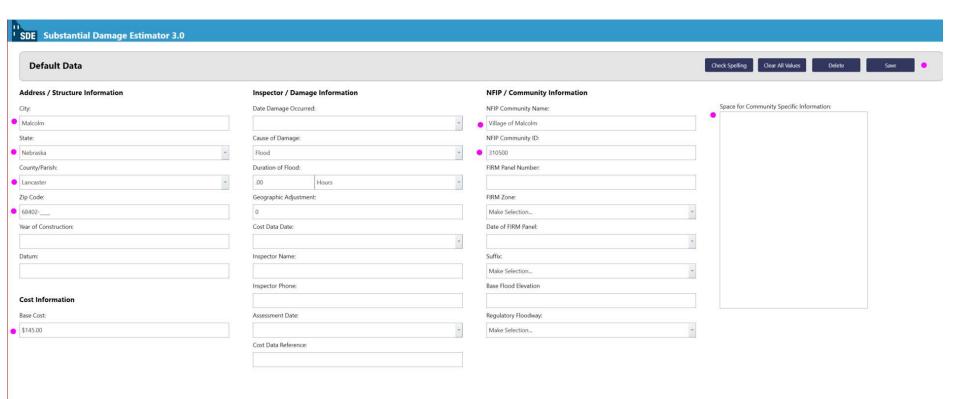


SDE-3.0 Enter Default Data

- Pre-populate up to 24 commonly used data fields
- Saves time
- Reduces typographic and consistency errors
- Data that needs to be referenced can be sought once
- The user can always overwrite any of the pre-populated data fields



Enter Default Data









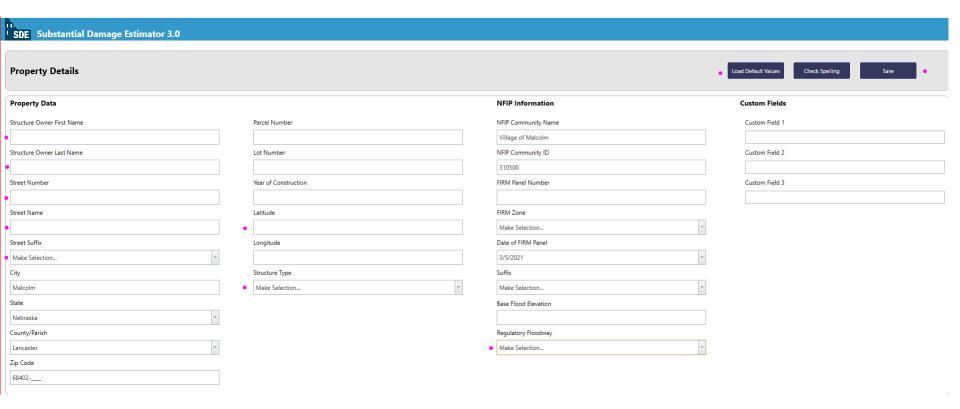


SDE-3.0 Add Properties

- Now you can enter individual data for properties you have identified
 - Properties in the floodplain
 - Possibly only those that are Pre-FIRM
 - Possibly only those with structures



Enter Individual Property Details



Assessor Information-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 Information-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

SDE-3.0 Importing Batch Files

You can create property records in batches by using the enterprise import function with any of the following:

- Excel spreadsheet,
- Access database,
- CSV file, or
- XML file

More information regarding importing data is available in **Section 3** of FEMA's P-784 "Substantial Damage Estimator (SDE) User Manual and Field Workbook."



Database is Ready for Use

In the future when disaster strikes you will be able to pull up properties within the floodplain and perform Standard Damage Assessments (SDAs)

Please Select a Property

	Structure Owner Name	Property Address	County/Parish	Parcel Number	Lot Number	Subdivision	Year of Construction
Þ	Doll R Assessed						
	Matt Helzer	423 Howard Avenue	Howard				
	Shandi Teltschik	1305 South 13th Street	Madison				
	Doll R Appraised						
	Becky Lerch	600 Elm Boulevard					
	George Wagner	100 Capital Parkway					
	John Laser,	243 Remington Point					
	John Callen	555 Downunder Walk					
	Test Minimum						
	Robin Roan	102 Lafaytte Street	Boone				
	Bill Smith	210 3rd Avenue	Lancaster				

Preload using default values.

New Property

Use Selected Prope

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.



Post Disaster Duties

- Repairs to structures in the floodplain must be permitted
- If the structure is damaged more than 50% of it's 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



New Resource

Online at NeDNR's "Digital Desk Reference"

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

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State of Nebraska Department of Natural Resources

March 1, 2021

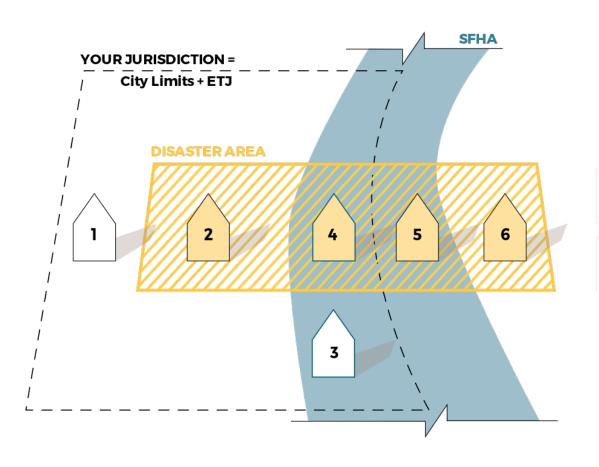


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- Not in jurisdiction, impacted, not in SFHA

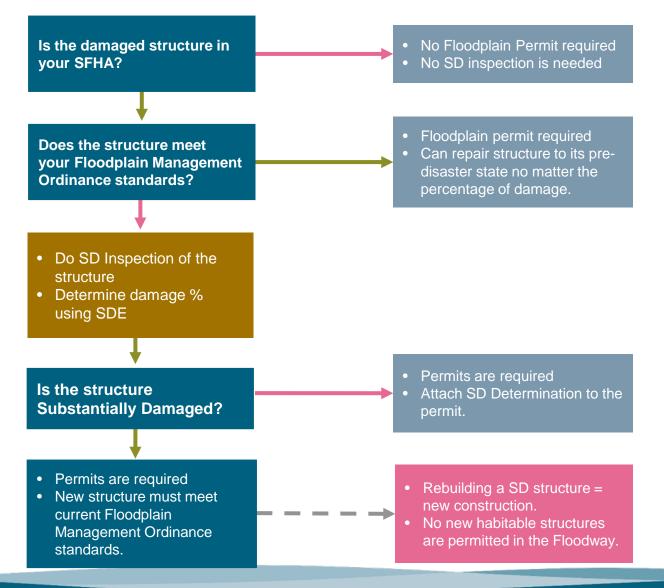
Not under Floodplain Administrator purview; Handbook does not apply.

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

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

Not under Floodplain Administrator purview; Handbook does not apply.

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

1. Office Review & Prerequisites

- ID structures exempt from SDA:
 - 1. Areas of SFHA *not* impacted by the disaster.
 - 2. Damaged structures located outside of the SFHA.
 - 3. Structures in compliance with current floodplain ordinance.

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.

Keep Public Informed

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.

"Somebody Already Inspected My House"

A disaster event may trigger <u>multiple</u> forms of damagescoping 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
- TEXAMPLE 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
- 3 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

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

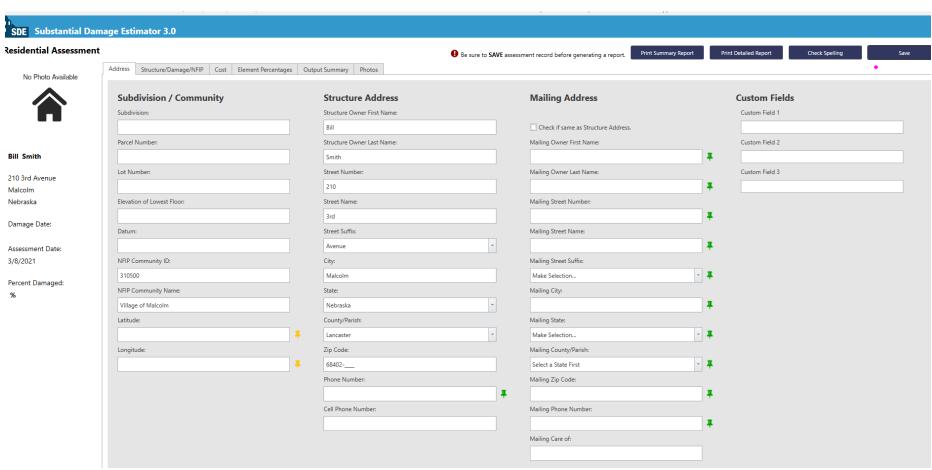
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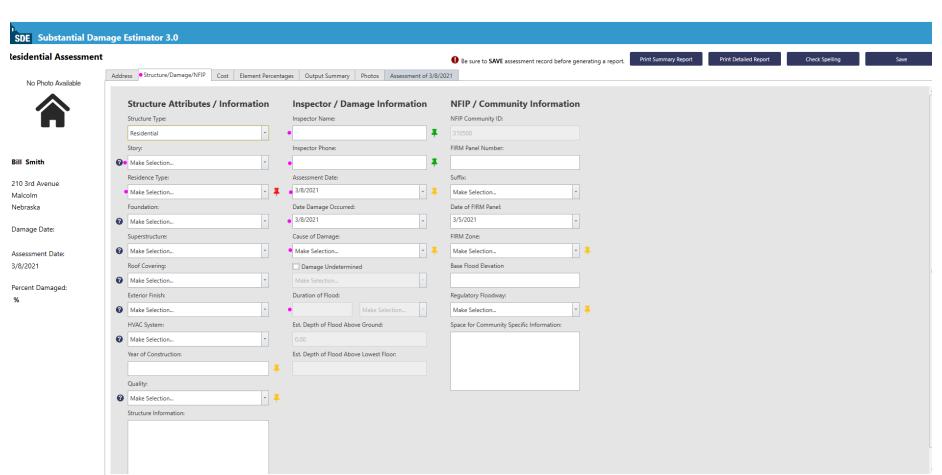
COMMUNITY		STRUCTUE	RE]	INSPE	CTION]
		Structure A	Structure Address:		Inspector Name:		
NFIP Community I	Name:				Team #	t:	
Latitude:		City:	City:		Assessment Date:		
Longitude: Z		Zip:	Zip:		Date Damaged:		
		County:					
PHOTOS							
Photo #:	Direction	facing: Northwe	st	O North O Southwest	O Nor	theast th	C East C Southeast
Photo #:		O Northwe	est	North Southwest	O Nor	theast th	EastSoutheast
TRUCTURE ATT	RIBUTES			Year Const	ructed:		
		Family Residence	0	Year Const		Manu	factured House
Residence Type:			0		se (Manu	factured House
Residence Type: Exterior:	One St Contin	ory uous Wall + Slab	0 0 0	Town or Row Hou Two or More Stori Basement Slab-on-Grade	se (Crawl	
Residence Type: Exterior: Foundation:	Single One St Contin Piles Stud-F Comm	uous Wall + Slab ramed on Brick	0 0 0	Town or Row Hou Two or More Stori Basement Slab-on-Grade ICF Masonry	se (Crawl	space
Residence Type: Exterior: Foundation: Superstructure:	Single One St Contin Piles Stud-F Comm Shingl	ramed ion Brick	000000	Town or Row Hou Two or More Stori Basement Slab-on-Grade ICF Masonry Standing Seam (N Slate	se (es	Crawl Piers	space and Posts
Residence Type: Exterior: Foundation: Superstructure: Roof Coverings:	Single One St Contin Piles Stud-F Comm Shingl	ramed on Brick	000000	Town or Row Hou Two or More Stori Basement Slab-on-Grade ICF Masonry Standing Seam (N Slate	se (es	Crawl Piers	space and Posts (Common Brick or
Residence Type: Exterior: Foundation: Superstructure: Roof Coverings: Exterior Finish:	Single One St Contin Piles Stud-F Comm Shingle Clay Ti Siding Brick \ None	ramed on Brick	000000	Town or Row Hou Two or More Stori Basement Slab-on-Grade ICF Masonry Standing Seam (N Slate Exterior Insulated Finishing System	see (desease) (desease) (desease) (desease) (desease) (desease)	Crawli Piers	space and Posts (Common Brick or ural)
Residence Type: Exterior: Foundation: Superstructure: Roof Coverings: Exterior Finish: HVAC System:	Single One St Contin Piles Stud-F Comm Shingle Clay Ti Siding Brick \ None Low Good	ramed on Brick	0 0 0 0 0 0 0 0 0 0	Town or Row Hou Two or More Stori Basement Slab-on-Grade ICF Masonry Standing Seam (N Slate Exterior Insulated Finishing System Heating or Cooling Budget Excellent	see (desease) (desease) (desease) (desease) (desease) (desease)	Crawle Piers	space and Posts (Common Brick or ural)
Residence Type: Exterior: Foundation: Superstructure: Roof Coverings: Exterior Finish: HVAC System: Quality:	Single One St Contin Piles Stud-F Comm Shingle Clay Ti Siding Brick \ None Low	ory uous Wall + Slab ramed on Brick es ele or Stucco /eneer	000000000000000000000000000000000000000	Town or Row Hou Two or More Stori Basement Slab-on-Grade ICF Masonry Standing Seam (N Slate Exterior Insulated Finishing System Heating or Cooling Budget Excellent Flood	detai)	None Struct	space and Posts (Common Brick or ural) ge and Wind
Cause of	Single One St Contin Piles Stud-F Comm Shingli Clay Ti Siding Brick \ None Low Good Fire	ory uous Wall + Slab ramed on Brick es ele or Stucco /eneer	000000000000000000000000000000000000000	Town or Row Hou Two or More Stori Basement Slab-on-Grade ICF Masonry Standing Seam (N Slate Exterior Insulated Finishing System Heating or Cooling Budget Excellent Flood Wind Hours	detai)	Crawling Piers	space and Posts (Common Brick or ural) ge and Wind

SDA Damage Inspection Worksheet Cont Residential -							
DEPRECIATION RATING	Very Poor Condition	Average Condition	Other:				
	Requires Extensive Repairs Requires Some Repairs	_					
ELEMENT PERCENTAGES							
Element	Percent Damaged	Element	Percent Damaged				
Foundation:		Floor Finish:					
Superstructure:		Plumbing:					
Roof Covering:		Electrical:					
Exterior Finish:		Appliances:					
Doors & Windows:		Interior Finish:					
Cabinets & Countertops:		HVAC:					
# of # of Stories		# of Stories	# of Stories Use measurement of longer of 2 sides.				
# of Stories		# of # of Stories S	# of ottories				

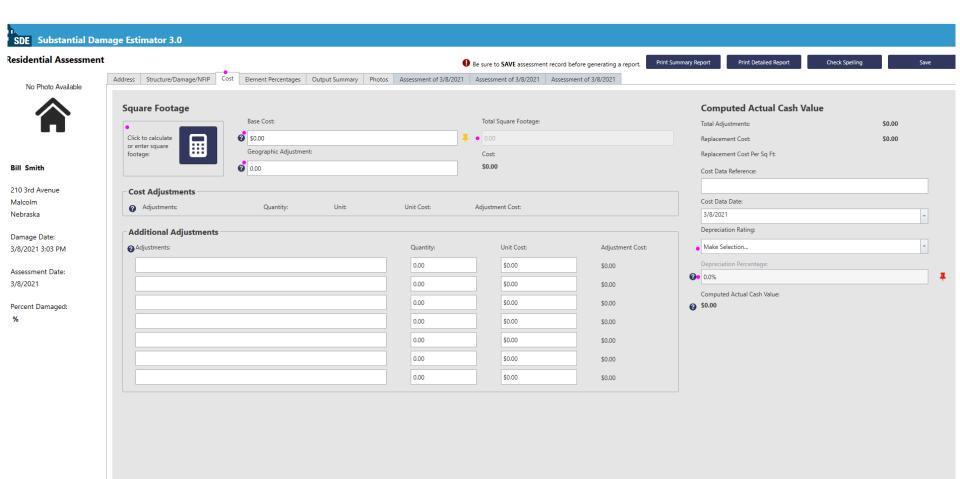
Processing Field Data



Structure/Damage/NFIP Page



Cost

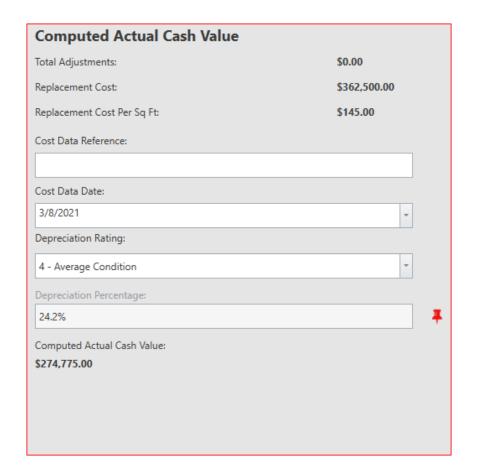


Calculating the Percentage Depreciation

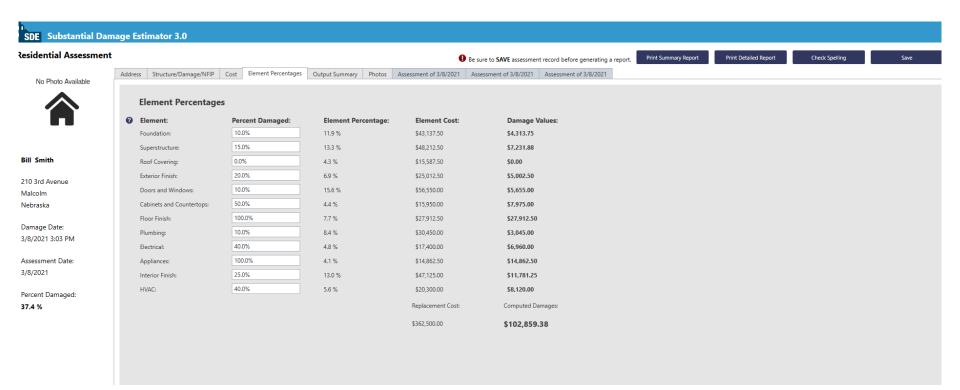
 As you can see by the red push-pin you are required to input a

Depreciation Percentage

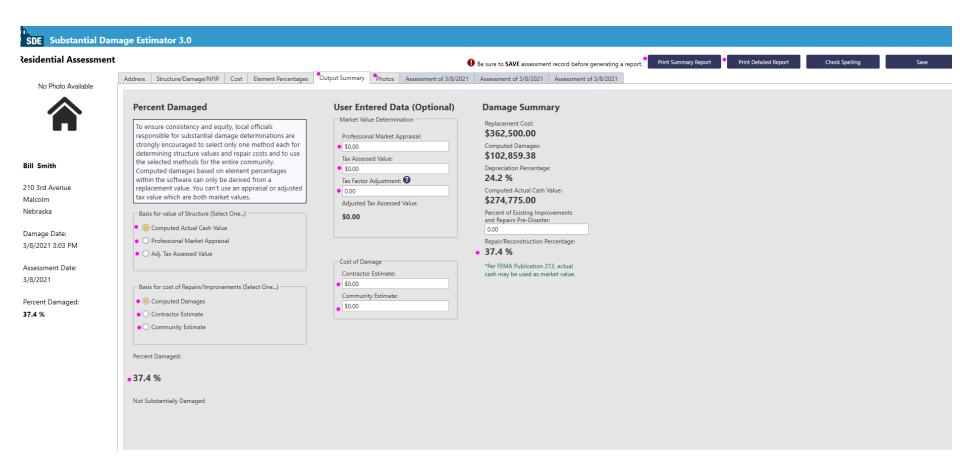
Never fear, if you choose
 a <u>Depreciation Rating</u>
 from the box above, the
 Percentage will be
 calculated for you.



Element Percentage

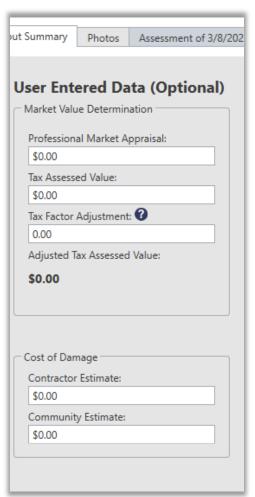


SDE Output



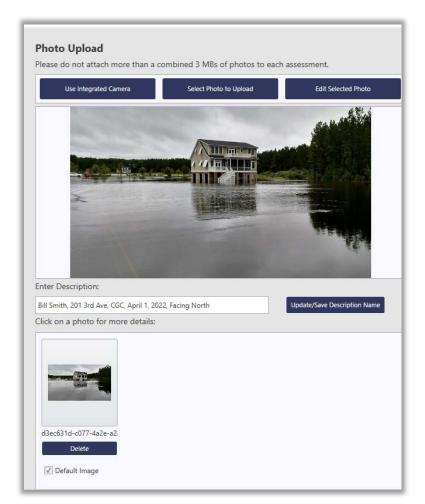
Assessed Value, Contractor Estimate, Etc.

- If you have acceptable values for Market Values or repair costs, you can input them in the <u>User</u> <u>Entered Data</u> field
- Keep records of the documents you used to make these determinations and file them with the permit and SDE Report



Uploading Pictures

- You can easily upload multiple pictures
- Having a picture of the structure prior to the disaster can be invaluable!
- Using the second button, simply select a photo to upload
- Include a description:
 - Street number
 - Street name and suffix
 - Team number
 - Photo date

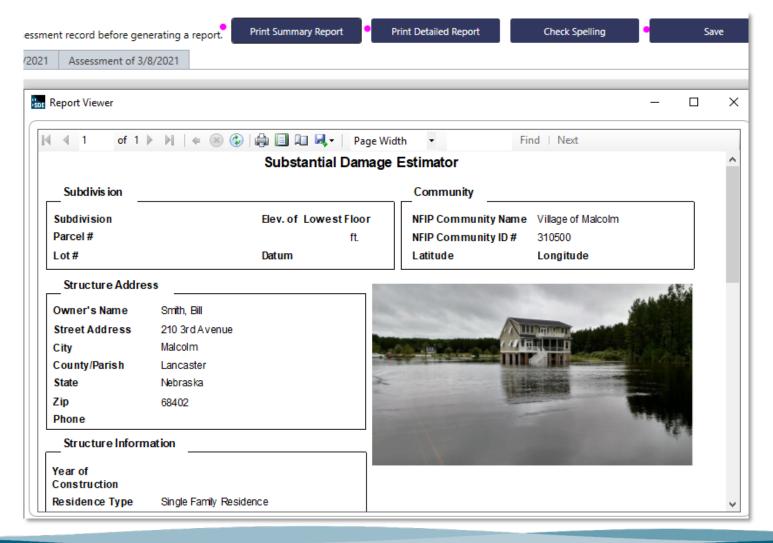


Create a Report Print Summary Reports for:

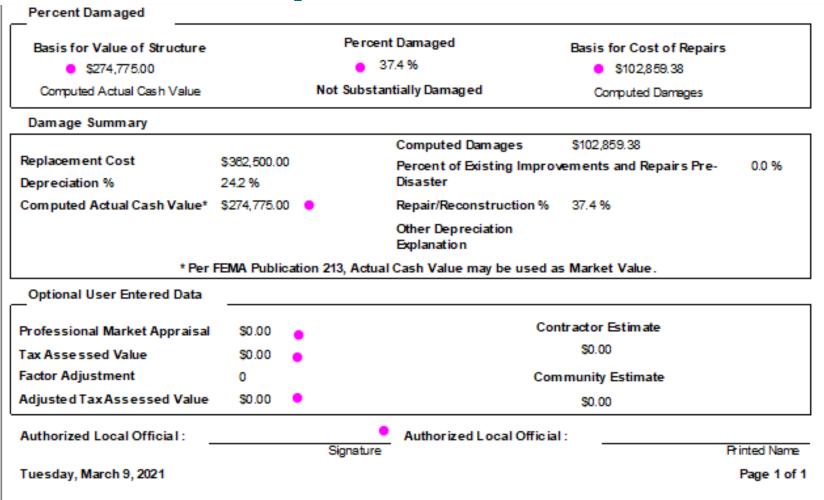
- Property owners along with a permit for repairs
- Detailed reports for your records



Create a Report



Create a Report



Filing Documentation

Or 2. BIA OA PIAN TRASSAGE EST

Lot 3- Par 01-Plan 87R45448-Ext. 1

IV A-Plan 8 IRASA



DEPT. OF NATURAL RESOURCES

Record Keeping

Necessary documents and permit records:

- Development permit application + 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)



For-ev-er

Contacts

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Adele Phillips

Flood Mitigation Planner adele.phillips@nebraska.gov (402) 471–9252

Elijah Kaufman

Natural Resource Specialist II elijah.kaufman@nebraska.gov (402) 471–0640

Katie Ringland

Chief | Floodplain Management katie.ringland@nebraska.gov (402) 471–2094