Updates to the FEMA SDE Version 3.0 Tool

IAFSM Annual Conference – March 15, 2018

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Overview

1. **Background**
2. **SDE 3.0 updates**
3. **Community responsibilities**
4. **Post-disaster community challenges**
   - **Tips for SDE data collection and use**
5. **Common mistakes by SDE inspectors**

Background

Purpose of SDE Inspections

1. To ***estimate*** damages in order to determine if the ***overall percent damage*** of a structure is above or below the NFIP required 50% threshold for Substantial Damage (SD).
2. The determination must be ***reasonable and defensible***.
3. The SDE tool allows local officials to rapidly collect the data based on visual observations to determine substantial damage in a formal, documented manner.

Background

NFIP definition of substantial damage:

Damage of *any origin* sustained by a structure whereby the cost of restoring the structure to its pre-damage condition would *equal or exceed 50%* of the market value of the structure before the damage occurred.

> **"*Any origin*" refers to any natural or man-made hazards – flood, fire, wind, etc. ("*Damage is damage*").**
>
> ***This requirement only applies to structures in the SFHA.***

Background

Substantial damage occurs when:

$$\frac{\text{Cost of Repairs}}{\text{Pre-damage market value}} \geq 50\%$$

Background

The Goal:

- **The goal is not to determine if a structure is 55% or 68% damaged.**
- **The goal is to determine whether the overall structure damage *is above or below 50%* and that *the overall damage is reasonable* and that SD determination is *supported by the data collected for that inspection*.**

Background

The SDE Tool:

- **Helps the community manage and formalize their SD responsibilities**
  - ***Identifies required data***
  - ***Provides an organized database***
  - ***SDE individual structure reports***
    - ***Provide structure owners with a detailed summary of data collected***
    - ***Can be used for ICC claims***

Background – SD vs. SI

The NFIP requires communities to evaluate both *substantial damage and substantial improvement* for structures in the SFHA.

The determinations are very similar:

$$\text{SD} = \frac{\text{Cost of Repairs}}{\text{Pre-damage market value}} \geq 50\%$$

$$\text{SI} = \frac{\text{Cost of Addition /Improvements}}{\text{Pre-improvement market value}} \geq 50\%$$

Background – Question 1

After a disaster, a homeowner seeks the required permit to repair interior damages, but wants to make the following changes:

- **Replace wall paneling with drywall**
- **Replace vinyl flooring with marble tile**
- **Replace the pre-flood windows with thermal pane windows**
- **Enlarge the kitchen**

1. ***Is this substantial damage, substantial improvement, or both?***
2. ***How should the community evaluate this?***

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Background – Answer 1

- **This could potentially be a combination of SD and SI based on an assumption that the drywall, ceramic tile and thermal pane windows *are upgrades, and therefore more expensive than the elements they are replacing*.**
- **The community will need to evaluate the *combined cost of repairs and improvements (including the expanded kitchen).***

Background – Question 2

Can structures with zero feet of water above the first floor have damages?

Background – Answer 2

Answer: *Yes*

- ***Damages may be due to:***
  - **Fire**
  - **Wind**
  - **Earthquake**
- ***There may be flood / storm damages to the:***
  - **Foundation**
  - **Roof**
  - **Superstructure or exterior walls**
  - **Exterior HVAC**

Background

Benefits of the SD/SI Requirements (beyond compliance with the NFIP)

1. **Breaks the disaster cycle by *improving resilience*.**
2. ***Saves money* for property owners through lower flood insurance premiums and reduced damages in the next flood.**
3. ***Improves the community's sustainability* by keeping communities safe and affordable for the long-term.**
4. ***Avoids creating blighted and abandoned neighborhoods*.**

SDE 3.0 Updates *(2017)*

- ***Current Version is 3.0*** **(FEMA P-784, dated 01.12.18).**
  - **Go to www.fema.gov and search on "SDE". The first return will be the link to the FEMA SDE web page.**
    - ***The SDE User Manual and Field Workbook, installation instructions, sample forms, and other resources can be found on the same and other pages.***
    - **Note: Minor tool revisions won't involve a change in version number, so check the FEMA website for *the latest release date* before starting the SDE inspections.**

SDE 3.0 Updates *(2017)*

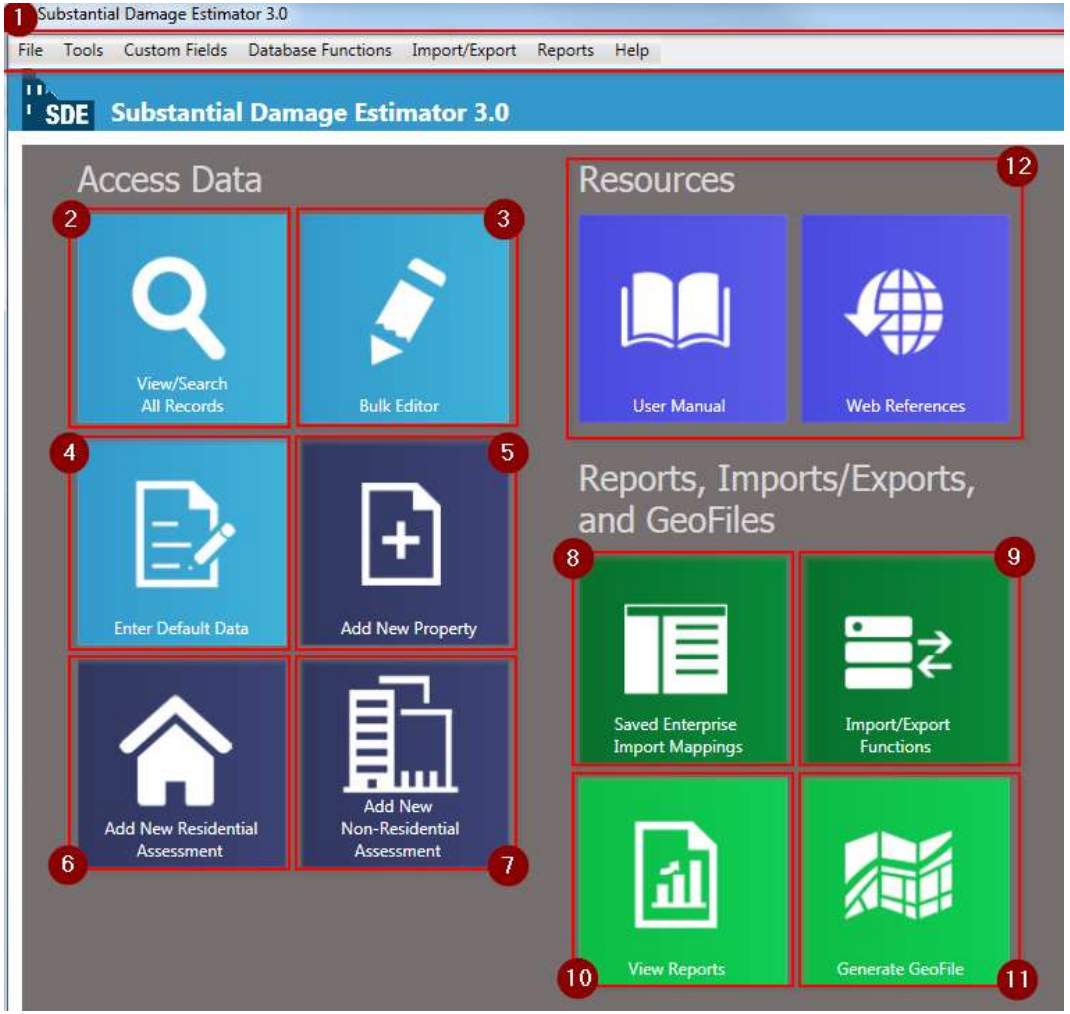
- **Many of the technical updates are internal and provide improved performance.**
- **Tool updates include:**
  - **Improved stability and functionality for large SDE inventories**
  - **Photo editing**
  - **New features to facilitate QA reviews**
  - **“SDE Notes” that allow users to create, edit, and delete reusable notes**
  - **Faster imports, exports, sorting and filtering**

SDE 3.0 Updates - Resources

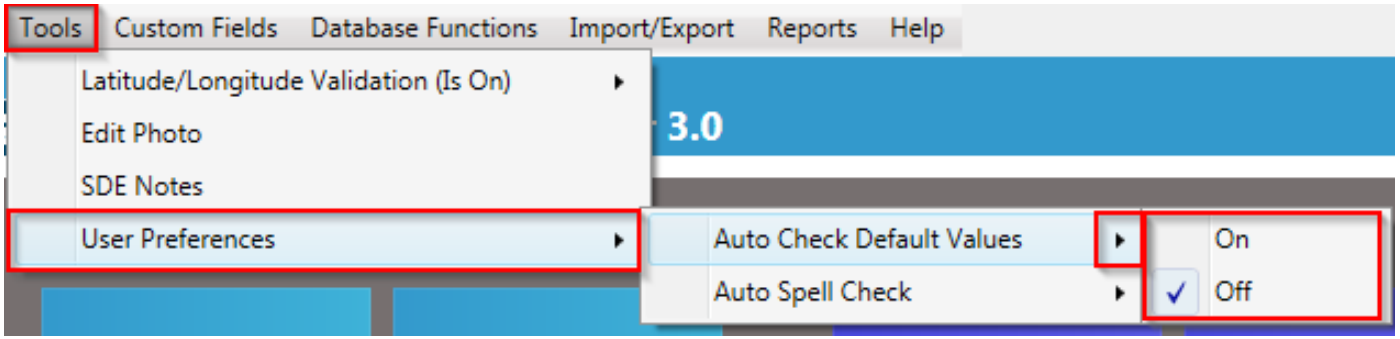
Includes the following documents:

- **Read Me – SDE 3.0 Installation Guide**
- **User Manual and Field Workbook**
- **SDE sample forms**
- **Substantial Damage Estimator Best Practices**
- **FEMA Building Science SDE FAQs**

SDE - Main Menu



SDE – Tools Menu

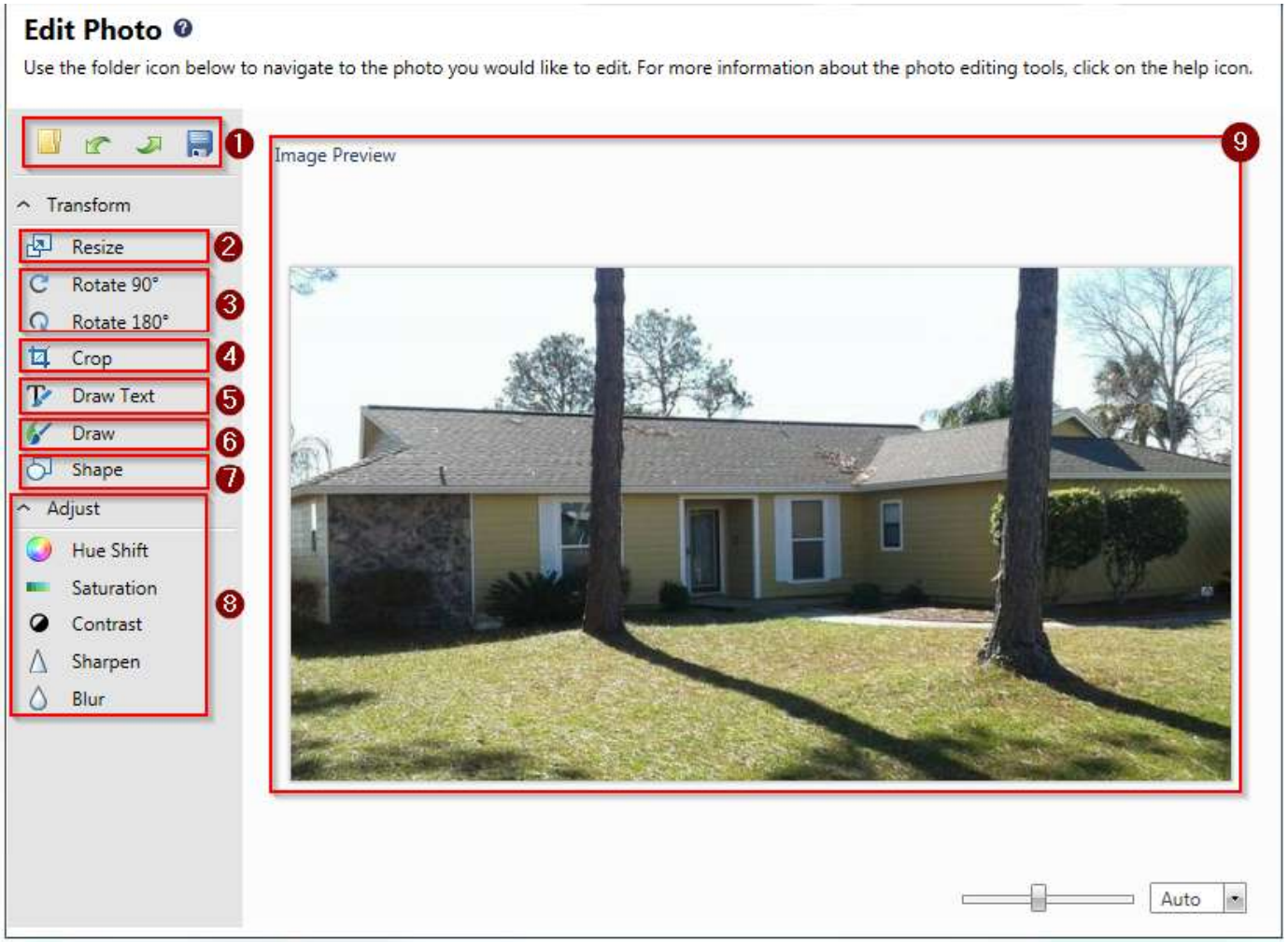


Edit Photo, SDE Notes, and User Preferences are new features

SDE Updates – New Features

- **Enterprise Import**
  - ***Imports property level data from Excel***
  - ***Functionality to save column mappings for future imports***
- **Custom User Settings**
  - ***Functionality to import user settings between SDE databases***
- **When "*Damage Undetermined*" is selected, the Cost and Element tabs become unusable.**

SDE Updates – Photo Editing



Community Responsibilities

The community should develop determinations that are:

1. ***Accurate*** **– by using current data**
2. ***Reasonable*** **- when compared to appraisals and fair market values**
3. ***Fair*** **- by using the same method for all structures**
4. ***Defensible*** **– so that others can replicate the determination**
5. ***Understandable*** **- by structure owners and elected officials**

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Post-Disaster Community Challenges

1. **Knowing their NFIP obligations**
2. **Lack of experience with disasters and recovery**
3. **Multiple, competing interests**
4. **Limited staff availability**
5. **Large quantity of affected structures**
6. **Large number of applicants for permits**

The following tips can make inspections more efficient

Tips for SDE Data Collection

1. ***Start inspections ASAP*** **(within a week of the disaster).**
2. **Verify that inspections *only involve structures within the SFHA*.**
3. ***Use pilot inspections for 2-3 structures*****, with all inspectors in a single group.**
4. ***Start slow*** **so that the inspectors feel comfortable with the data requirements.**
5. ***Review first inspections in detail*** **to identify errors and data inconsistencies. *Initial errors can easily snowball into significant problems.***

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Tips for SDE Data Collection

6. **Use a *Letter of Introduction* with a community POC (name and phone number).**
7. **Determine if the inspectors can eyeball estimates of structure dimensions.**
8. ***Always check the glass* for HW marks.**
9. **Check vegetation, fences, and adjacent structures and vehicles for HW marks or debris/dirt lines.**
10. ***Consider using an address board in the photos* (this helps tie a photo to an address).**

Tips for SDE Data Collection

High water dirt mark on vegetation

Tips for SDE Data Collection

Sample address board

Tips for SDE Data Collection

11. **Use *two-person inspection teams* (for safety, speed, and consensus on data collection).**
12. **Identify and review procedures for resident interactions with inspectors.**
13. **Identify areas with *2 feet or less of water* inside the structures (save for later or determine that there is no SD).**

Common Mistakes by SDE Inspectors

1. **Use of the *wrong assessment form* (residential for a non-residential structure or vice versa).**
2. **Use of the non-residential assessment form for *businesses located in SF homes or MHs.***
3. **Failure to include damages from sources other than flooding.**
4. ***Confusing notes* in the Structure Information data field.**

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Common Mistakes by SDE Inspectors

5. ***Missing values*** **for the Depreciation Rating or the Geographic Adjustment for the base cost. This will result in an error statement of *Data Entry Incomplete*.**

6. **Photos not showing the complete structure.**

7. **Photos not showing the *top and bottom of a high water mark*.**

Want More SDE Information ?

- **See the handout out *FEMA SDE Resources* (includes web addresses).**
- **Consider volunteering with the *IL RAFT* (Rapid Assistance Flood Team). See:**
  - ***Mike Sutfin*, Village of Ottawa, Chair of the IAFSM Floodplain Management Committee**
  - ***Paul Osman* – IL NFIP State Coordinator**

Questions ?

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