



State of Washington Substantial Damage Guidance

**A Guide for Local Floodplain Managers
Conducting Substantial Damage
Determinations in a Post-Disaster
Environment**

By

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For the

Shorelands and Environmental Assistance Program

Washington State Department of Ecology

Olympia, Washington

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Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400
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Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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DEPARTMENT OF
ECOLOGY
State of Washington

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Acknowledgements

Many National Flood Insurance State Coordinating Offices have prepared guides similar to this one. In particular, I note that the State of Missouri Flood Damage Assessment Packet informed many of the concepts in this document.

Guidance for Making Substantial Damage Determinations after Natural Disasters

The purpose of this document is to provide a framework for conducting substantial damage determinations after a natural disaster. This guidance is narrowly focused on assisting building officials and floodplain managers that are suddenly confronted with the need to address multiple substantial damage determinations quickly in a post-disaster environment.

The NFIP and Existing Buildings

The National Flood Insurance Program (NFIP) is based on the concept that buildings can be built in a way that can make them safe from flooding. Washington has adopted the 2018 I-codes. The I-code standards require buildings to have the usable living space at least one foot above what FEMA has identified as the Base Flood Elevation (the expected elevation of the one percent or 100-year flood). Many jurisdictions also require that utilities that can be damaged by flood water also be at least one foot above the Base Flood Elevation.

One of the goals of the NFIP is to bring buildings that do not meet current flood safety requirements up to standard. FEMA rules make upgrading buildings to current flood safety standards a requirement when a significant investment is being made in the building.

The NFIP Requirements

The NFIP rules define substantial damage as

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.

Anytime a building in the Special Flood Hazard Area is damaged, the building official must make a determination as to whether the building has been substantially damaged. Repairs require a flood permit, usually in the form of a building permit. The building permit application to conduct the repairs must contain information about the damage that occurred and a fair market value estimate of the cost to repair that damage. The applicant can also provide an appraisal of the fair market value of the building before the damage. However, the appraisal is not mandatory, unless required by the local government.

The building official must determine whether a building has suffered substantial damage. This is referred to as a substantial damage determination. Documentation of this determination should be maintained in the permit file. If the cost to repair the damage is equal to or greater than 50 percent of the value of the before damaged building, then the building is substantially

damaged. A substantially damaged building must usually be repaired in such a manner as to bring it into full compliance with current applicable NFIP and local standards.²

Preventing and Minimizing Disaster Damage

The best way to respond to substantial damage from a flood is to address the potential for damage before a flood happens. Where a building official knows of buildings that are at risk from flood damage, it is usually less costly and emotionally taxing to address the risk before a flood rather than after a flood event. A floodplain manager or building official may know where the most at-risk buildings are in their community. If a county has received new flood maps from FEMA in recent years, there is a good chance that FEMA also developed additional information through its RISK Map process that can help you identify at-risk buildings. Much of this information can be found at the Department of Ecology website at [Washington State RiskMAP Program 2020 \(arcgis.com\)](https://www.ecy.wa.gov/Programs/RiskMAP/Program2020/).

There may be grants available to help to elevate a building or remove it from the floodplain. Such grants usually take time to procure. Ideally, the community can identify at risk buildings before a major flood rather than after. An overview of FEMA grant sources is contained at [fema_summary-fema-hazard-mitigation-assistance-grant-programs_032321.pdf](#).

FOLLOWING A FLOOD

All local floodplain management ordinances in the State of Washington require permits for the repair or reconstruction of flood damaged structures. The local floodplain administrator must ensure that the repair of a damaged structure within the community's Special Flood Hazard Area (SFHA) meets the requirements of the community's floodplain management ordinance.

Following a flood event, the local administrator should follow these five steps:

Step 1: Contact the Floodplain Section of the Department of Ecology (Ecology) or the Federal Emergency Management Agency (FEMA) if you need assistance. Both agencies have experience, materials, and guidance to assist in carrying out anyone all floodplain management responsibilities. Ecology (see contact information at the end of this document) or FEMA at (425) 487-4600.

² The standards are somewhat different for buildings the meet the NFIP definition of a historic structure.

Step 2: Conduct a Quick and Generalized Inventory of Substantial Damage in Your Community.

Conduct a windshield survey of substantially damaged buildings in your community. This survey should be conducted as soon as it is safe to do so. It is critical to see the impact that a natural disaster has as soon as possible after the event. Windshield assessments can be conducted from the public right-of-way. As much as possible, damage to individual buildings should be documented using the field assessment forms in Appendix A. If feasible, photographs should be taken from public right-of-ways.

The area where substantial damage may have occurred should be mapped. This does not need to be a sophisticated map. It can be as simple as marking areas of concern on a map of the community.

In rare situations, the damage from a natural disaster is extensive throughout the community or a portion of the community. In these situations, it may be necessary to merely identify and map the area for which substantial damage may have occurred. Every building repair or improvement located in the mapped area will then need a substantial damage determination.

Speed is critical for the initial substantial damage survey. Evidence of damage starts to disappear quickly after a flood event. High water marks start to disappear or become less obvious through natural causes or human activity. Some property owners may start to make repairs without appropriate permits.

Once a community has mapped the area affected by the natural disaster, it may be possible to conduct individual substantial damage determinations.

A floodplain manager or building official can also use the FEMA Substantial Damage Estimator 3.0 software is available to help make these substantial damage determinations. The pre-flood market value of every flooded structure can quickly be estimated from the County Assessor's records.

Step 3: Public Outreach and Communication

The owners of each building that may be substantially damaged should be notified in writing of the requirement to obtain a flood permit before repairs are started. This can be done by providing the notice while you are conducting the windshield survey or by mail. This notice need not be as specific for an enforcement case. Please see Appendix B for a sample letter.

Post information for the public about the local ordinance requirements for obtaining permits for repairs and rebuilding. Repairs sometimes begin on flooded buildings soon after the water recedes from the structure. Therefore, it is very important that this step take place as soon as possible. History shows that information spreads quickly among flood victims. Posted signs, flyers, press releases, and letters mailed to individual owners can all be used to augment this

purpose. Become educated regarding the damage assessment process, reconstruction methods, and available mitigation programs. Have a “Floodplain Development Permit Application” in hand and ready to distribute. Keep it simple. Be prepared for residents who are angry that they cannot start immediate repairs.

The community should also work with media outlets to get word out that flood permits are required before repair work is started.

Step 4: Provide technical assistance.

Property owners and other members of the public will have questions about how to best repair buildings and how to meet construction code requirements. Being able to assist people with answers to their questions will help post-disaster permitting run smoother. If you have questions about floodplain management that you cannot answer, you can contact the Department of Ecology Regional Floodplain Management Planner or FEMA staff for assistance.

Step 5: Review Building Permit Applications

As applications for building permits to repair buildings are made, conduct substantial damage determinations. If a site inspection has not already been conducted, then a site visit should be completed. The applicant should provide a fair market value estimate of repair costs. The estimate must be reasonable. In making the substantial damage determination, you can use the Assessor’s Office appraisal of the building value. Land values should not be included. Determining the building value and cost of repairs consistently and accurately is important.

BUILDING VALUE. Building value is the market value of the structure only. Land and exterior improvements (pools, pool houses, landscaping, walkways, etc.) are excluded. Following a disaster, most communities find that it expedites the process to obtain the structure’s market value from the County Tax Assessor. This method of obtaining market value ensures consistency.

Other acceptable methods of estimating market value include:

- Independent appraisals by an appraiser licensed to practice in the State of Washington.
- Detailed estimates of the structure’s Actual Cash Value (replacement cost minus depreciation).
- Qualified estimates based on sound professional judgment made by the staff of the local building department.

DETERMINATION OF EVENT DAMAGE – COST OF REPAIR. “Substantial Damage” refers to the repair of all damage sustained and the CANNOT reflect a level of repairs that is LESS than the amount of the damage sustained. If the owner does not intend to repair the damaged building right away, or if the owner cannot afford to make all repairs immediately, the local official should inspect the property to determine whether, based on estimates, the work required to restore it to its pre-damaged condition constitutes Substantial Damage.

Substantial Improvement/Substantial Damage Desk Reference

FEMA's Substantial Improvement/Substantial Damage Desk Reference (FEMA P-758, May 2010) is an extremely helpful guide when conducting substantial damage determinations. This document can be found at [Substantial Improvement/Substantial Damage Desk Reference \(fema.gov\)](https://www.fema.gov/substantial-improvement-substantial-damage-desk-reference).

Listed below is information about various building components that do get counted in substantial damage calculations and well as a list of components that do not get counted.

COSTS THAT MUST BE INCLUDED IN SUBSTANTIAL DAMAGE/SUBSTANTIAL IMPROVEMENT DETERMINATIONS:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteer labor.
- Site preparation related to the improvement or repair (e.g., foundation excavation or filling in basements).
- Demolition and construction debris disposal related to removing structure walls, floors, etc. This should NOT include cleanup or disposal of contents.
- Labor and other costs associated with demolition, moving or altering of the structure to accommodate improvement, additions and making repairs.
- Costs associated with maintaining compliance with other codes or regulations, including the Americans with Disabilities Act (ADA).
- Costs associated with elevating a structure when the proposed elevation is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales tax on materials

Structure Elements and exterior finishes, including;

- Foundations (e.g., spread or continuous foundation footings, perimeter walls, chain walls, 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)
- 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

- Heating, ventilation, and air conditioning (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

Guidance from Substantial Improvement/Substantial Damage Desk Reference – FEMA P-758, May, 2010, P. 4-5, 4-6, 4-7

COSTS THAT MAY BE EXCLUDED FROM SUBSTANTIAL DAMAGE/SUBSTANTIAL IMPROVEMENT DETERMINATIONS:

- Clean-up and trash removal; (e.g., cost of draining a basement, removing dirt and mud, and cleaning and drying out buildings)
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate and identify required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and re-carpeting installed over finished flooring such as wood or tile
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes
- Plug-in appliances such as washing machines, dryers, and stoves.

**Guidance from Substantial Improvement/Substantial Damage Desk Reference – FEMA P-758,
May, 2010, P. 4-7**

The attachments in the appendices of this document may be of help to floodplain managers.
The documents can be modified to address local circumstances.

Appendix A. Windshield Survey Field Assessment Form

SAMPLE WINDSHIELD SURVEY DAMAGE ASSESSMENT WORKSHEET

1. Address: _____

2. Special Flood Hazard Area:

Community I.D. #: _____

FIRM Panel: _____

Flood zone: _____ Base Flood Elevation _____

3. Duration of Flooding: Days _____ Hours _____

4. High Water Mark:

A) Exterior Walls _____ ft.

5. Type of Structure:

A) Exterior:

- | | |
|----------------------------|--------------------------|
| 1) Plywood/Hardboard _____ | 5) Brick _____ |
| 2) Stucco _____ | 6) Concrete Block _____ |
| 3) Siding/Shingles _____ | 7) Other describe) _____ |
| 4) Masonry Veneer _____ | |

B) Manufactured/Mobile Home:

- 1) Dimensions: a) single wide _____ size _____ x _____
b) double wide _____ size _____ x _____
- 2) Skirting: yes _____ no _____

6. Description of Structure:

A) 1 story _____ 2 story _____ Tri-level _____
1 1/2 story _____ Bi-level _____ 3 or more _____

B) Garage: attached _____ detached _____
Carport: attached _____ detached _____

D) Foundation:
Slab-on-grade _____
Crawlspace _____
Basement _____ (Finished ___ Unfinished ___)
Poured walls _____
Block walls _____

Post-piers-piles _____

7. Description of Damage:

Use corresponding numbers given below to answer C-F below:

- | | |
|-----------------------|--------------------------|
| 1. settlement/cracked | 2. partially missing |
| 3. sagging | 4. dislodged/destroyed |
| 5. submerged | 6. include all the above |
| 7. no damage | 8. other: describe |

A) Foundation _____

B) Exterior Walls _____

C) Roof _____

11. Overall condition of structure:

A) Minor damage _____
C) Totally destroyed _____

B) Major Damage _____
D) Structure off foundation _____

12. Potential for Substantial Damage

Does this structure need a formal Substantial Damage Determination?

Yes _____

No _____

Reviewed by: _____ Date: _____

Appendix B: Sample Notice that Flood Permit is Required

NOTICE

Because this building is located in a floodplain and was damaged by flooding, a damage assessment must be conducted by the (city or county).

Before doing any repair work you must call the (city or county) community's Floodplain Administrator at (____) _____ to schedule an inspection.

Failure to obtain reconstruction approval may result in a penalty.

Appendix C: SAMPLE HANDOUT FOR RESIDENTS

Information Regarding Cleanup of Damaged Structures within the Floodplain

Repairs to damaged buildings located within the (**community's name**) floodplain require a permit from the (**community's name**) building department and/or the (**community's name**) Floodplain Administrator and a Substantial Damage Assessment (SDE).

1. You **MUST** have obtained a Floodplain Development Permit and a SDE determination from (community name) before you repair, alter, or replace any of the following items:

- a. Walls
- b. Siding
- c. Plaster
- d. Cabinets
- e. Flooring
- f. Electrical systems
- g. Plumbing
- h. Heating
- i. Foundation

2. You **MUST** obtain a Substantial Damage Assessment before you repair the above items. The permit office must conduct a damage assessment of the building. This assessment will determine if a structure is more than 50% damaged (substantially damaged). If a structure is found to be substantially damaged, the structure may not be repaired until compliance with the local floodplain ordinance is demonstrated. It is imperative that the community's Floodplain Administrator is contacted prior to taking any actions to repair damage related to the flood.

3. You may proceed with cleanup activities and temporary emergency repairs to prevent further deterioration, such as preventing the spread of mold and/or mildew, without a permit. These include:

- a. Removing and disposing of damaged contents, carpeting, wallboard, and insulation.
- b. Hosing and scrubbing, or cleaning floors, walls, and ductwork.
- c. Covering holes in roofs or walls and covering windows to prevent the weather from inflicting further damage.
- d. Removing sagging ceilings, shoring up broken foundations, and other actions to make the building safe to enter.

Prior to proceeding with cleanup activities that are allowed without a permit, thoroughly document the condition of the building by photographing the inside and outside of all areas that are being affected by the cleanup/emergency repairs.

NOTE: BUILDING REPAIRS AND STRUCTURAL IMPROVEMENTS ARE NOT ALLOWED WITHOUT A PERMIT FROM THE LOCAL FLOODPLAIN ADMINISTRATOR.

Add Floodplain Administrator's name Floodplain Administrator's Phone number

Appendix D: Sample Press Release

SAMPLE PRESS RELEASE RESIDENTS IN (COMMUNITY) WITH FLOOD DAMAGE REMINDED OF PERMIT REQUIREMENTS

As property owners in (community) contemplate clean up and repairs following recent flooding, the (community permit office) is reminding residents to obtaining 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 flooding.

Special conditions apply to substantially damaged buildings - those in which the total cost of repairs is 50 percent or more of the structure's pre-flood 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. 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 less. 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.

Property owners and residents with flood-damaged buildings should contact (local building administrator) for more information on repair and reconstruction permits.

Appendix E: Sample Substantial Damage Calculation Form

SAMPLE DAMAGE ASSESSMENT WORKSHEET (long hand version)

1. Address: _____

2. Owner: _____

Telephone Number _____

3. Occupant: _____

Telephone Number _____

4. Insurance Coverage (Optional):

Company _____ Policy Number: _____

Building: \$ _____ Contents: \$ _____

5. Special Flood Hazard Area:

Community I.D. #: _____

FIRM Panel: _____ FIRM Date: _____

Flood zone: _____ Base Flood Elevation _____

Existing Lowest Floor Elevation: _____ (if available)

6. Duration of Flooding: Days _____ Hours _____

7. High Water Mark:

A) Exterior Walls _____ ft.

B) Interior Walls _____ ft.

8. Type of Structure:

A) Exterior:

- | | |
|----------------------------|--------------------------|
| 1) Plywood/Hardboard _____ | 5) Brick _____ |
| 2) Stucco _____ | 6) Concrete Block _____ |
| 3) Siding/Shingles _____ | 7) Other describe) _____ |
| 4) Masonry Veneer _____ | |

C) Manufactured/Mobile Home:

- | | |
|----------------|---|
| 1) Dimensions: | a) single wide _____ size _____ x _____ |
| | b) double wide _____ size _____ x _____ |
| 2) Skirting: | yes _____ no _____ |

9. Description of Structure:

A) 1 story _____ 2 story _____ Tri-level _____
1 1/2 story _____ Bi-level _____ 3 or more _____

B) Garage: attached _____ detached _____
Carport: attached _____ detached _____

C) Roofing:

Metal/corrugated or ribbed _____ Composition shingles _____
Other: Describe _____

D) Foundation:

Slab-on-grade _____
Crawlspace _____
Basement _____ (Finished ___ Unfinished ___)
 Poured walls _____
 Block walls _____
 Post-piers-piles _____

E) Heating and Cooling:

Forced air _____ Boiler _____
Wall furnace or baseboard _____ Heat Pump _____
Fireplace/wood burning stove _____ Other _____

F) Plumbing: Number of bathrooms: _____

G) Built-In Appliances:

List: _____

10. Description of Damage:

A) Plumbing: 1) Is it exposed? _____ 2) Does it need repair? _____

B) HVAC/Electrical

1) Water depth _____ ft.
2) Damaged _____ (Repairable _____ Replaced _____)

Use corresponding numbers given below to answer C-F below:

- 1. settlement/cracked
- 2. partially missing
- 3. sagging
- 4. dislodged/destroyed
- 5. submerged
- 6. include all the above
- 7. no damage
- 8. other: describe

C) Foundation _____

- D) Exterior Walls _____
- E) Interior Walls _____
- F) Roof _____

11. Overall condition of structure:

- A) Minor damage _____
- B) Major Damage _____
- C) Totally destroyed _____
- D) Structure off foundation _____

12. Determination of Substantial Damage

Percent Damage = $\frac{\text{Cost of Repair}}{\text{Value of Building}}$ = _____

In the event that the percent damage is equal to or greater than 50%, the building is substantially damaged.

_____ This building is substantially damaged and therefore must be elevated or flood proofed so that the lowest floor is protected at or above the elevation of the base flood.

_____ This building is not substantially damaged. This building can be repaired without having to be mitigated.

_____ This is a properly elevated structure and may be reconstructed at its existing elevation.

Reviewed by: _____ Date: _____

Approved by: _____ Date: _____

Appendix F: The FEMA Substantial Damage Estimator (SDE 3.0)

The SDE 3.0 tool was developed by FEMA to assist state & local officials in determining substantial damage for residential & non-residential structures in accordance with local floodplain management ordinances meeting the regulatory requirements of the National Flood Insurance Program (NFIP). This tool can be used to assess flood, wind, wildfire, seismic, and other forms of damage. The SDE tool is based on the concept of using damage estimates for individual structural elements to determine whether the structure as a whole is substantially damaged. It allows community officials with limited appraisal or construction backgrounds to develop reasonable estimates of a structure's values and damage in accordance with NFIP requirements.

Communities with multiple flooding issues should obtain the SDE 3.0 software and Field Workbook and learn to use the program. Using the software will save time and research. SDE 3.0 software can be downloaded directly from the FEMA website:

<http://www.fema.gov/media-library/assets/documents/18692>

The Installation Package Zip-file contains all of the items needed to load SDE 3.0. This Zip-file contains the manuals listed on the website download page and will also be downloaded in that package. This includes the Installation Guide which will provide answers to installation questions that have not been included in this packet. IT personnel should be contacted when having trouble installing the SDE software.

Installation Steps

Prior to installing the SDE 3.0 Tool, users are encouraged to export and save any existing SDE data from previous versions of the SDE tool. Although it is not required, FEMA recommends that users uninstall previous versions of the SDE tool from the host computer using the Windows Add/Remove Programs function to avoid confusion between past and current SDE inventories.

Installation steps may vary depending on the host computer setup and the utility program installed on the computer to unzip the SDE tool installation file downloaded from the FEMA website.

Use the following steps to install the SDE 3.0 Tool using a zip file downloaded from the FEMA website:

USER NOTE: A host computer can only have one installation of the SDE tool.

1. After opening the FEMA website (<http://www.fema.gov>), search on "SDE" or use the SDE web page found at <https://www.fema.gov/media-library/assets/documents/18692> to locate the SDE tool download function.

2. Download the SDE installation zip file to the My Documents folder on the host computer and unzip the file. In many cases, users can unzip the folder by right-clicking on the file and selecting the option Extract All ... from the list of options or by double-clicking the zip folder and selecting the option Extract all files from the list of choices displayed. Some users may have an unzip utility installed that activates automatically when they select a zipped folder or file.
3. If the .NET Framework 4.6.1 is not already installed, the SDE installation routine will attempt to search online for the Framework and install it on the host computer during the SDE 3.0 installation. Local administrative rights and an Internet connection are required to install the .Net Framework 4.6.1. The user will need to accept the Framework license agreement (Figure 1) for the installation to continue.
4. After the SDE file has been extracted, open the folder and double click on the "Setup.exe" file to start the tool installation process. The Setup Wizard window shown in Figure 2 will appear.
5. Select Next button to continue the installation.
6. The Select Installation Folder window will appear next. This window allows the user to proceed with installation in the default location or change the destination folder. After the destination folder is identified, select Next to continue.
7. When the Confirm Installation window appears, the Setup Wizard is ready to proceed with the SDE installation on the host computer. Select Next to continue.
8. The installation status window will show the status of the installation process. When the status bar reaches 100%, select Next to continue.
9. Once the installation is complete, select Close to end the installation process.
10. Upon completion of the installation, an SDE icon will appear on the desktop of the host computer. Double-click the icon to run the SDE tool.