National Flood Insurance Program

Substantial Damage Assessments and Determinations

A Guide for Local Communities and Floodplain Administrators

Oregon Department of Land Conservation and Development

635 Capitol Street NE, Suite 150
Salem, OR 97301
503-373-0050

DLCD

FOREWORD

The Department of Land Conservation and Development (DLCD) created this guide to help floodplain administrators and other staff with substantial damage determinations after a disaster. Recovering from an event is important, but reducing or mitigating future risk post-disaster is equally important.

The Federal Emergency Management Agency (FEMA) and DLCD offer training and technical assistance post-disaster, such as this guide, to help ensure a local floodplain development code or ordinance is being met. The best tools are worthless if they stay on a shelf and are not used.

Prepared by:
Deanna Wright, CFM, Hazard Planner
Oregon National Flood Insurance Program Coordinator
Department of Land Conservation and Development
Created August 2025

This Guide is available from the
Natural Hazards — Floodplain Management Program at:
https://www.oregon.gov/lcd/nh/pages/nfip.aspx

Primary Contact for local Floodplain Administrators:
Deanna Wright, CFM
National Flood Insurance Program Coordinator
Oregon Department of Land Conservation and Development (DLCD)
Cell: 971-718-7473 Main 503-373-0050
Deanna.wright@dlcd.oregon.gov

Or contact FEMA Regional staff at:
fema-r10-mit-fmi@fema.dhs.gov
425-487-4600

CONTENTS

I. Introduction to Substantial Damage Determinations

Communities that participate in the National Flood Insurance Program (NFIP) have adopted minimum or higher floodplain regulations in a locally adopted floodplain development code or ordinance. These communities are responsible for implementing their floodplain programs at the local level. New construction located in the 1% annual chance — or 100-year — floodplain must be elevated to or above the base flood elevation or to the community's adopted freeboard requirements, which is typically one (1) or more feet freeboard in Oregon. This same elevation flood protection standard also applies to substantially damaged structures.

Substantial Damage and Substantial Improvement are terms that work together and are defined by FEMA[1] as follows:

> Substantial Damage (SD): 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% of the market value of the structure before the damage occurred.
>
> Substantial Improvement (SI): Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:
>
> 1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official, and which are the minimum necessary to assure safe living conditions; or
> 2. Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

For more detailed information, see FEMA's SI/SD Desk Reference (FEMA P-758).[2]

Some communities have adopted lower SI thresholds that are less than 50% or have cumulative SI provisions so it is important to review the community's adopted floodplain code for unique circumstances.

---

[1] FEMA Publication P-758, Substantial Improvement/Substantial Damage Desk Reference, https://www.fema.gov/sites/default/files/documents/fema_nfip_substantial-improvement-substantial-damage-desk-reference.pdf, May 2010.
[2] Ibid.

II. When to Conduct Substantial Damage Determinations

Any City, County, or Tribal government that participates in the NFIP must conduct SD determinations anytime a structure is damaged from any source. The damage could be from an ice storm event, river or coastal flooding event, fire, or other disaster to one structure or extend across several neighborhoods. Staff will usually conduct a SD determination when an individual floodplain permit is submitted by an applicant or owner, on a case-by-case basis. However, during a larger disaster staff may need to conduct SD determinations for several structures. As a result of Oregon's 2020 fires, over 651 structures were destroyed in the floodplain. Therefore, community staff should develop a plan in advance of an event to outline how they will handle significant impacts to multiple structures.

Pre-planning will make it easier to conduct SD determinations, so all applicants and owners are treated alike, especially if several structures are damaged and large numbers of people are submitting permit applications for rebuilding.

The image below illustrates the path of SD determinations from start to finish:

Local officials in NFIP-participating communities are responsible for regulating and enforcing all development standards in the floodplain by issuing permits including SD/SI determinations, per Title 44 Code of Regulations (CFR) Section 60.3(a)(3)). After an event, local responsibilities include:

- Determining if the structure is in the Special Flood Hazard Area (SFHA).
- Determining market value of the structure and costs to repair consistently and uniformly.
- Determining if repair/improvement equals or exceeds 50% of the structure's pre-damage value.
- Requiring permits for floodplain development. In some situations, permit fees may be waived but permit issuance cannot be waived.

Following a larger disaster, local floodplain administrators should act fast and communicate with the local building official and emergency manager. The Oregon Model Floodplain Development permit[3] contains a section for SI/SD determinations. Alternatively, a community may establish its own stand-alone SI/SD floodplain development permit application (see Appendix A Sample SD Worksheet).

[3] Oregon Model Floodplain Development Permit, https://www.oregon.gov/lcd/NH/Pages/NFIP.aspx, June 2019.

For a Presidentially-declared disaster, the community's cost to implement permitting and reviewing may be reimbursed for certain activities through FEMA's Public Assistance program. For more information regarding Public Assistance, reference the Disaster Recovery Reform Act of 2018, Section 1206 (DRRA 1206).[4] DLCD recommends local staff track their time conducting SD determinations via local timecard coding procedures for any possible reimbursable activities under DRAA 1206.

III. How to Conduct Substantial Damage Determinations

For more intense damage, local staff may need to rely on other staff and resources to conduct SD determinations. This will take triage and communication to determine where the damage occurred, how many structures were impacted and to what degree, and if the structures are in the floodplain.

Step 1: Participate in daily disaster response and recovery briefings. Local floodplain administrators should attend daily briefings, attend preliminary damage assessments in the field when safe, or do vehicle or windshield surveys to estimate and document damage. Communicate closely and often with the emergency manager, local building official, and other staff at the local level to share information.

Step 2: Identify SD structures and document the determinations. There are three (3) methods local staff can use to make SD determinations in the field post-disaster; refer to Appendix A in this guide for more information:

1. FEMA's SD evaluation form (paper spreadsheet format, see Appendix A for example),
2. Oregon Department of Emergency Management (OEM) Damage Assessment tool (digital tool, see additional OEM Hub notes below), or
3. FEMA's Substantial Damage Estimator Tool[5] (digital tool).

To identify potentially impacted structures or areas of concern, DLCD recommends working with local GIS staff to create regional maps of the impacted areas, such as fire burn area or flood inundation extents, and overlaying those extents with the effective floodplain map(s) and aerial imagery showing structure footprints with address points. Structures that are obviously substantially damaged can forego a more detailed SD assessment for floodplain management purposes and be directly assessed as SD. For example, aerial or satellite imagery may assist local staff to verify extent of damages to certain structures and may show burn scars and burned remains of structures, serving as sufficient documentation. This type of data is more applicable for structures that are totally destroyed or SD more than 60%.

[4] FEMA Section 1206 | Building Code and Floodplain Management Administration and Enforcement, https://www.fema.gov/assistance/public/policy-guidance-fact-sheets/section-1206-building-code-and-floodplain-management-administration-and, accessed May 2025.
[5] https://www.fema.gov/emergency-managers/risk-management/building-science/substantial-damage-estimator-tool

Step 3: Issue SD letters Send letters to property owners and offer additional information or resources on the requirements for rebuilding in the floodplain. This step is recommended to convey SI/SD requirements to property owners or developers and document the community's SD determination for insurance purposes (e.g., should the property owner pursue NFIP Increase Cost of Compliance insurance option). This is also an opportunity to conduct local outreach and explain aspects of any local permitting requirements post-disaster. See the Sample SD letter in Appendix A or additional sample letters in FEMA P-758.[6]

Step 4: Provide technical assistance to owners and developers for rebuilding in the floodplain. Not everyone will request permits post-disaster. Consider creating a webpage for post-disaster construction resources.

Step 5: Issue permits for any development in the floodplain. Permit issuance in the floodplain is a requirement by the NFIP and cannot be waived. However, other local considerations could be implemented, such as waiving floodplain permit fees, prioritizing the processing of floodplain development permits post-disaster, issuance of emergency RV placement permits for less than 180 days in the floodplain, or issuance of emergency floodplain permits for debris removal or other projects.

Performing SD assessments can be difficult in a larger disaster. DLCD recommends conducting field visits with two or more staff and when it is safe to do so. Contact DLCD or FEMA for additional assistance for SD determinations if needed.

Damage Assessments versus Substantial Damage Determinations

Damage Assessments are typically conducted in the field by damage assessment strike teams, city or county staff, emergency management personnel, other assigned staff, or in some cases the public as a self-reporting mechanism that is later verified. These initial damage assessments are conducted to meet FEMA reporting requirements related to the level of damages to structures for disaster funding requests. FEMA post-disaster funding programs include Public Assistance, for public infrastructure and facilities, and Individual Assistance, for individual homes, non-profits, and private businesses. See DRRA 1206 requirements for federal recovery programs.[7] Substantial Damage Determinations are similar but are additionally required for floodplain management and permitting purposes, per Title 44 CFR Section 60.3, and typically cited within a local floodplain ordinance or development code.

OEM created the Damage Assessment Hub site[8] after the devastating 2020 Oregon fires. The site helps explain the digital damage assessment tools, forms, and assessment process in

[6] FEMA Publication P-758, Substantial Improvement/Substantial Damage Desk Reference, https://www.fema.gov/sites/default/files/documents/fema_nfip_substantial-improvement-substantial-damage-desk-reference.pdf, May 2010.
[7] FEMA Section 1206 | Building Code and Floodplain Management Administration and Enforcement, https://www.fema.gov/assistance/public/policy-guidance-fact-sheets/section-1206-building-code-and-floodplain-management-administration-and, accessed May 2025.
[8] https://oregon-damage-assessment-project-geo.hub.arcgis.com/

general. In summary, assigned field teams digitally collect necessary data on a phone or tablet in a geospatial format, or GIS application, using template forms. The field collected data is then displayed in damage assessment dashboards and includes:

- Information collected for business and homes damage category (destroyed, major, minor, affected, not impacted),
- Ability to upload photographs of the damage assessment per individual property or structure, and
- Substantial Damage dashboard for reviewing damages in the floodplain (for floodplain managers and delegated officials to complete).

FEMA's Damage Assessment category for "destroyed" meets the same definition of "substantially damage" whereby the structure was determined to be at least **50% damaged**. Therefore, local floodplain staff may reference the damage assessments as a tool in making local SD determinations post disaster. DLCD, OEM, and FEMA can offer trainings on conducting damage assessments and SD determinations post disaster upon request. Reference DLCD's training video on Substantial Damage we recorded in April 2025.

IV. Making Substantial Damage Determinations - the Calculation

The repair and/or replacement work is SI/SD if the cost of work exceeds 50% of the market value of the structure before the damage occurred. Below is an illustration of the SI/SD calculation:

$$\frac{\text{Cost of Improvement or Cost to Repair to Pre-Damage Condition}}{\text{Market Value of Building}} \geq 50\%$$

The local floodplain administrator must make the final determination. For structures located in the floodway, local floodway provisions would apply to new development outside of the existing footprint replacement (e.g., a lateral addition). A SI/SD determination can be appealed at the local level. Other factors to consider when evaluating SI/SD is if the building is pre- or post-FIRM (Flood Insurance Rate Map) and if the structure is in the V/VE zones (high-risk coastal areas). Therefore, it is highly recommended to reference FEMA's SI/SD Desk Reference,[9] Table 6-1a. Compliance Matrix, to decide based upon whether the structure is pre- or post-FIRM, as shown in the excerpt below:

[9] FEMA Publication P-758, Substantial Improvement/Substantial Damage Desk Reference, https://www.fema.gov/sites/default/files/documents/fema_nfip_substantial-improvement-substantial-damage-desk-reference.pdf, May 2010.

Types of Work	Building is Pre-FIRM	Building is Post-FIRM
Rehabilitation (renovate or remodel), not SI	Compliance not required	Work shall comply and shall not be allowed to make the building non-compliant with any aspect of the building that was required for compliance
Rehabilitation (renovate or remodel), SI	Building required to comply	Work shall comply and shall not be allowed to make the building non-compliant with any aspect of the building that was required for compliance (see Note below table)
Lateral addition and Rehabilitation, SI	Addition required to comply; building required to comply	Addition required to comply; building required to comply (see Note below table)
Lateral addition, not SI	Addition not required to comply	Addition required to be elevated to at least the elevation of the existing lowest floor

Source: FEMA Publication P-758, Substantial Improvement/Substantial Damage Desk Reference

Generally, making SI/SD calculations comes in the form of an individual floodplain development application submitted by the applicant/owner. However, making SI/SD determinations in a larger disaster recovery environment may be very challenging. Chapter 7 of the FEMA SI/SD Desk Reference (FEMA P-758)[10] offers suggestions to prepare for disasters. Oregon's NFIP Coordinator and FEMA staff can provide additional technical assistance to local floodplain staff post-disaster.

There are two main steps in making **SI/SD calculations**: 1) determining or verifying damage or improvement costs, and 2) determining or verifying market value of the structure, outlined in the following sections of this guide. The burden is on the applicant to submit a complete application, but local floodplain staff can assist and direct where needed.

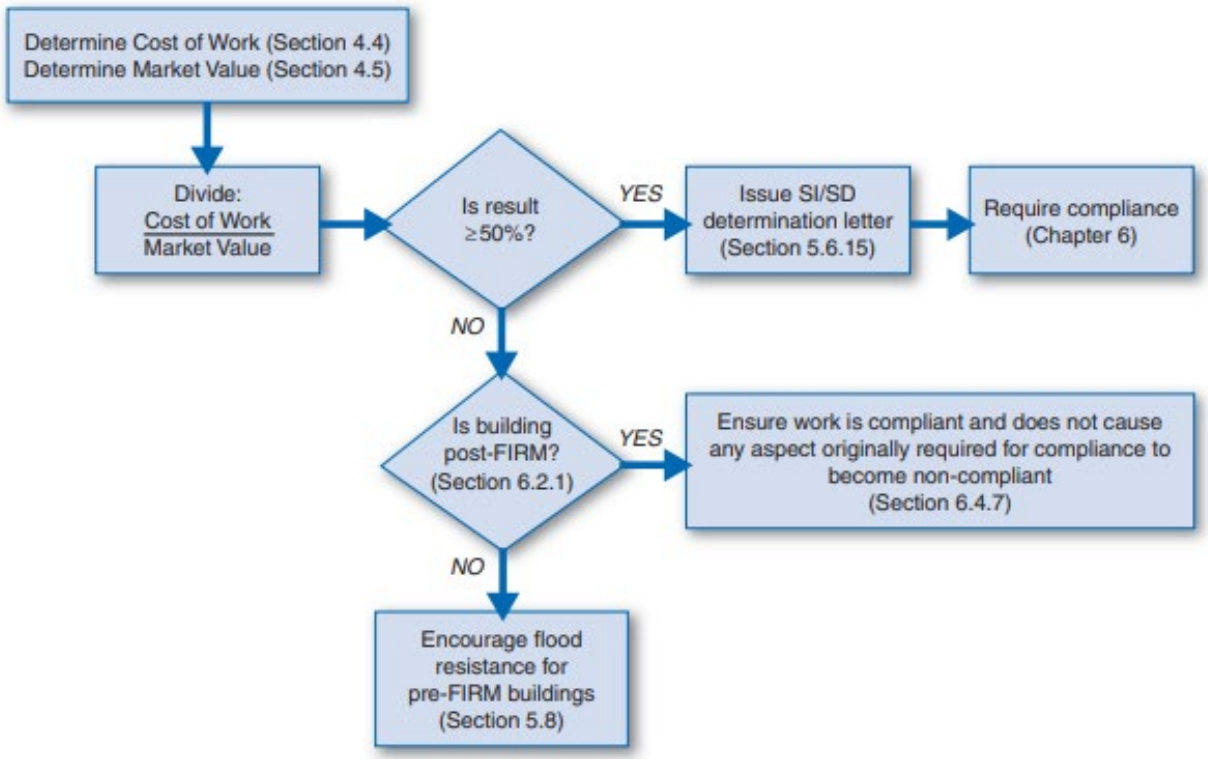
V. Determining Damage Costs (Improvement Costs)

Types of work that activate SI/SD requirements generally include:

- Rehabilitation or remodeling
- Lateral and vertical additions
- Repair of foundations
- Restoration or repair of damage of any origin
- Reconstruction of demolished or destroyed buildings
- Work on post-firm buildings
- Work on existing buildings where flood maps are revised

[10] Ibid

Below is the SI/SD determination illustration:



Source: FEMA Publication P-758, Substantial Improvement/Substantial Damage Desk Reference

Consistency in making SI/SD determinations is key. Consider adding Section V of the Oregon Model Floodplain Permit [11] for SI/SD determinations to the local floodplain development permit form. Alternatively, a community can implement a stand-alone Substantial Damage Assessment worksheet or application which could be helpful in a larger post-disaster situation, see Sample Worksheet in Appendix A.

Acceptable data sources for damage cost or cost of improvements include:

- Applicant/owner itemized costs of repair or improvements (see Appendix A).
- Itemized list of improvements and repair costs prepared by the contractor or professional doing the work (see Appendix A). This is the preferred method.
- Current Oregon International Code Council (ICC) building valuation table estimates.
- FEMA's Substantial Damage Estimator Tool (see link in Appendix) to provide estimates of building values and costs to repair. Generally, this method is used post-disaster when local official need to assess large numbers of structures to make substantial damage determinations.

[11] Ibid.

Costs to include in SI/SD calculations:[12]

1. Material and labor for all structural elements, including:
   - ✓ Spread or continuous foundation footings and pilings
   - ✓ Monolithic or other types of concrete slabs
   - ✓ Bearing walls, tie beams and trusses
   - ✓ Floors and ceilings
   - ✓ Attached decks and porches
   - ✓ Interior partition walls
   - ✓ Exterior wall finishes (brick, stucco, siding) including painting and moldings
   - ✓ Windows and doors
   - ✓ Re-shingling or re-tiling a roof
   - ✓ Hardware

2. All interior finishing elements, "including":
   - ✓ Tiling, linoleum, stone, or carpet over subflooring
   - ✓ Bathroom tiling and fixtures
   - ✓ Wall finishes (drywall, painting, stucco, plaster, paneling, marble, etc.)
   - ✓ Kitchen, utility, and bathroom cabinets
   - ✓ Built-in bookcases, cabinets, and furniture
   - ✓ Hardware

3. All utility and service equipment, "including":
   - ✓ HVAC equipment
   - ✓ Plumbing and electrical services
   - ✓ Light fixtures and ceiling fans
   - ✓ Security systems
   - ✓ Built-in kitchen appliances
   - ✓ Central vacuum systems
   - ✓ Water filtration, conditioning, or recirculation systems

4. Cost to demolish storm-damaged building components

5. Labor and other costs associated with moving or altering undamaged building components to accommodate the improvements or additions

6. Overhead and profits

[12] Ibid.

Costs to exclude from SI/SD calculations:

1. Plans and specifications
2. Survey costs
3. Permit fees
4. Post-storm debris removal and clean up
5. Outside improvements, including:
   - ✓ Landscaping
   - ✓ Sidewalks
   - ✓ Fences
   - ✓ Swimming pools
   - ✓ Screened pool enclosures
   - ✓ Detached structures (including garages, sheds, and gazebos)
   - ✓ Landscape irrigation systems

Donated materials must be counted and included in the estimate as well as labor rate estimates of the cost of improvements and cost of repair. Some jurisdictions will also need to track cumulative SI if that is adopted into the local floodplain code or ordinance.

For additional information refer to FEMA's SI/SD Desk Reference (FEMA P-758) Ch. 4 – Making SI/SD Determinations.[13]

VI. Determining Market Value

There are four options to determine the market value of a structure before starting construction or before the damage occurred:

1. Assessment and taxation valuations from a local taxing or assessment authority may be the most popular method for determining market value.
2. Professional appraisal in accordance with standard practices of the profession may be the most accurate and reliable method for determining market value.
3. Actual cash value, generally obtained from insurance industry on the cost to replace a structure on the same property with a new structure of like-kind and quality.
4. Qualified estimate, based upon the professional judgement of a local official.

Most communities rely on the local Assessment and Taxation (A&T) office calculations for market value of a structure. A&T valuations may not be available for certain city- or county-owned facilities, or for some industrial or commercial structures. Therefore, other methods will need to be used. The key is to be consistent in conducting SI/SD determinations at the local

[13] Ibid.

level. Section 4.5 of FEMA's SI/SD Desk Reference (FEMA P-758) provides more details on these methodologies.[14]

VII. Issue the Permit

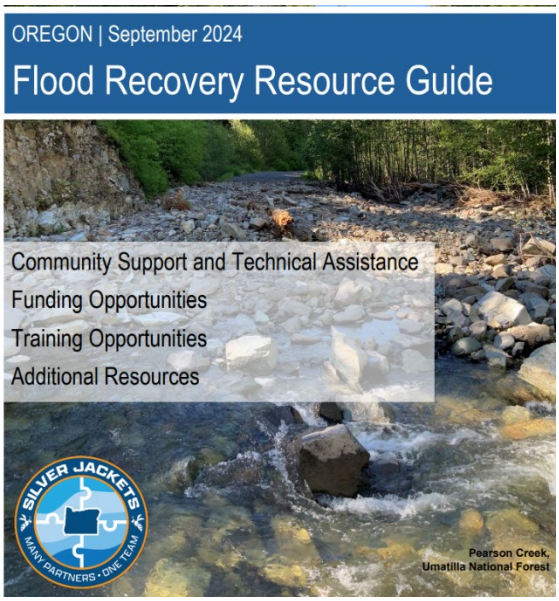
Permits can be issued in several ways in Oregon. Some communities issue floodplain permits via a Type I or II administrative or ministerial process, some issue floodplain permits via a checklist format, and others issue via conditions of approval within the floodplain permit application form. While floodplain permits cannot be waived, a jurisdiction may consider other decision-making assistance options. These options could include, but are not limited to, waiving the floodplain permit fees, prioritizing the processing of floodplain development permits, issuance of emergency RV placement for less than 180 days in the floodplain permits, and issuance of emergency floodplain permits for debris removal or other projects.

VIII. Records Management

All SI/SD records must be maintained in perpetuity per CFR 59.22(a)(9)(iii)) and Oregon Model Floodplain Ordinance Section 4.2.2. Digital scanned permit system format is acceptable. DLCD created a model floodplain permit form [15] and included a section for SI/SD that may be incorporated into your local floodplain permit application. Again, for larger post-disaster determinations, a jurisdiction may wish to create its own SI/SD floodplain permit application, see Appendix A Sample Worksheet application.

IX. Flood Recovery Resource Guide

A resource guide for flood recovery in Oregon was created with the partnership of Oregon Silver Jackets. This Flood Recovery Resource Guide is available at: https://orsilverjackets-geo.hub.arcgis.com/pages/tools.



The guide offers resources to help communities prepare, respond, mitigate, and recover from floods with topics including:

- Community Support and Technical Assistance
- Funding Opportunities
- Training Opportunities
- Additional Post-Disaster Resources

[14] Ibid.
[15] Ibid.

X. Appendix A - Substantial Damage Documents or Products

1. **Sample SD Notification letter**
2. **Sample SD Worksheet (Application Form)**
3. **Itemized List of Improvements and Cost**
4. **Sample SD Field Evaluation Form**
5. **Damage Assessment Fact Sheets and Tools**

Appendix A –Sample SD Notification Letter

Floodplain Administrator's Name, Title
Address
Community Name, Oregon Zip Code

Date

Property Owner
Address
Community Name, Oregon Zip Code

Dear Property Owner:

__***Insert Community Name***__ participates in the National Flood Insurance Program (NFIP). All communities that participate in the NFIP have adopted locally enforced flood damage reduction regulations. These regulations contain standards for new, substantially damaged and/or substantially improved structures in identified Special Flood Hazard Areas. In accordance with these regulations, __***Insert Community Name***__ conducted substantial damage determinations for all potentially-damaged structures in the Special Flood Hazard Area. **Based on this inspection, your property has been substantially damaged.**

A substantially damaged structure is one that has damage, from any cause, that equals or exceeds 50 percent of the market value of the structure. **To maintain our community's participation status in the NFIP, and ensure that your future flood risk is reduced, your structure must be brought into compliance with local floodplain ordinances.** Please contact __***Insert Name of Local Floodplain Administrator***__ to discuss options for bringing the structure into compliance and to obtain a local floodplain development permit for this work. If you choose to contest this determination, please provide a contractor's estimate of all repairs and improvements, and/or a recent appraisal of the market value of your structure.

There may be some funding sources available to help pay for the cost of bringing your structure into compliance. Because the **Insert Disaster Type/Name** resulted in a Presidential disaster declaration, Hazard Mitigation Grant Program (HMGP) funds become available to mitigate structures in the floodplain. Please contact this office for additional details on other possible funding sources including: Flood Mitigation Assistance (FMA) and the Building Resilient Infrastructure and Communities (BRIC) grants.

Failure to bring this structure into compliance is a violation of local flood damage reduction regulations. Section __***Insert Violation and Penalties Section # of local floodplain regulations***__ has possible ramifications for failure to comply. Failure to comply will also result in much higher flood insurance premiums for you and/or future owners of the property.

Please contact me at __***Insert Phone Number***__ to discuss this matter further. Thank you for your cooperation during this difficult recovery period.

Sincerely,

Name of Local Floodplain Administrator, Title

Appendix A - Sample SD Worksheet, Source FEMA P-758

Substantial Improvement Worksheet for Floodplain Construction

(for reconstruction, rehabilitation, addition, or other improvements, and repair of damage from any cause)

Property Owner: _____

Address: _____

Permit No.: _____

Location: _____

Description of improvements: _____

Present Market Value of structure ONLY (market appraisal or adjusted assessed value, BEFORE improvement, or if damaged, before the damage occurred), not including land value: $ _____

Cost of Improvement -
Actual cost of the construction** (see items to include/exclude) $ _____

Include volunteer labor and donated supplies.

Ratio = $\frac{\textbf{Cost of Improvement (or Cost to Repair)}}{\textbf{Market Value}}$ X 100 _____ %

If ratio is 50 percent or greater (**Substantial Improvement**), entire structure including the existing building must be elevated to the base flood elevation (BFE) and all other aspects brought into compliance.

Important Notes:

1. Review cost estimates to ensure that all appropriate costs are included or excluded.
2. If a residential pre-FIRM building is determined to be substantially improved, it must be elevated to or above the BFE. If a non-residential pre-FIRM building is substantially improved, it must be elevated or dry floodproofed to the BFE.
3. Proposals to repair damage from any cause must be analyzed using the formula shown above.
4. Any proposed improvements or repairs to a post-FIRM building must be evaluated to ensure that the improvements or repairs comply with floodplain management regulations and to ensure that the improvements or repairs do not alter any aspect of the building that would make it non-compliant.
5. Alterations to and repairs of designated historic structures may be granted a variance or be exempt under the substantial improvement definition) provided the work will not preclude continued designation as a "historic structure."
6. Any costs associated with directly correcting health, sanitary, and safety code violations may be excluded from the cost of improvement. The violation must have been officially cited prior to submission of the permit application.

Determination completed by: _____

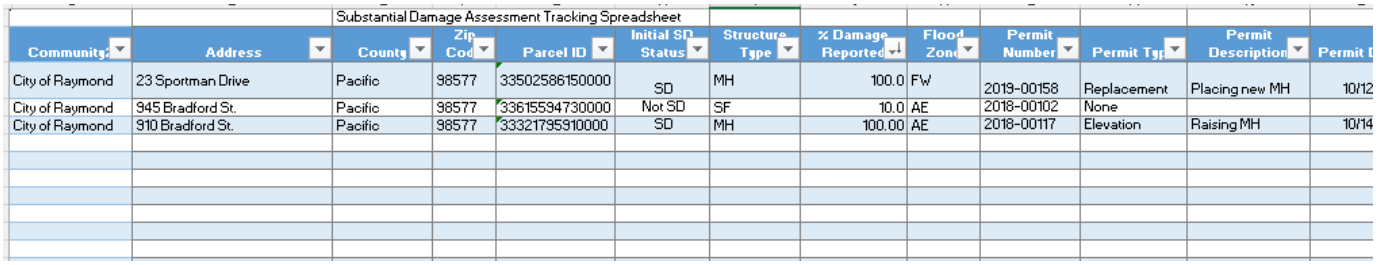
Date: _____

Appendix A – Itemized List of Improvements and Costs

ITEMIZATION OF CONSTRUCTION COSTS TO COMPLETE PROJECT

	Work Description	Cost of Materials	Cost of Labor	Comments
1	Foundation/ Footings/ Pilings			
2	Concrete Slab			
3	Masonry Work			
4	Rough Carpentry			
5	Roofing and Gutters			
6	Insulation/ Weather Stripping			
7	Exterior Finish (stucco/ siding)			
8	Finished Carpentry			
9	Drywall			
10	Cabinets (built-in)			
11	Floor Covering			
12	Plumbing/ Gas			
13	Bathroom Fixtures			
14	Kitchen Fixtures			
15	Electrical and Lighting Fixtures			
16	Built-in Appliances			
17	HVAC System			
18	Paint and Wallpaper			
19	Demolition and Removal			
20	Overhead and Profit			
21	Construction Supervision			
	GROSS TOTAL = Contract Price			

Appendix A – Sample SD Field Evaluation Form – excerpt below, contact DLCD staff for Excel spreadsheet format sample.



Substantial Damage Assessment Tracking Spreadsheet

Community	Address	County	Zip Cod	Parcel ID	Initial SD Status	Structure Type	% Damage Reported	Flood Zon	Permit Number	Permit Typ	Permit Description	Permit D
City of Raymond	23 Sportman Drive	Pacific	98577	33502586150000	SD	MH	100.0	FW	2019-00158	Replacement	Placing new MH	10/12
City of Raymond	945 Bradford St.	Pacific	98577	33615594730000	Not SD	SF	10.0	AE	2018-00102	None		
City of Raymond	910 Bradford St.	Pacific	98577	33321795310000	SD	MH	100.00	AE	2018-00117	Elevation	Raising MH	10/14

Appendix A - Damage Assessment Fact Sheets and Tools

FEMA SD Estimator Tool fact sheet: https://www.fema.gov/sites/default/files/2020-07/fema_factsheet_sde3.0.pdf

Oregon Emergency Management Damage Assessment Hub: https://oregon-damage-assessment-project-geo.hub.arcgis.com/. This contains project documents:

- Damage Assessment Tool Overview and Presentation
- Damage Assessment Reference Guide
- Form Design Template

FEMA's Substantial Damage Quick Guide: https://www.fema.gov/fact-sheet/substantial-damage-quick-guide

Appendix A - DLCD's Substantial Damage Training Recording (April 2025)

Training link: https://www.youtube.com/watch?v=Xi0HOVTVzRQ