

Why Prepare a Substantial Damage Response Plan?

Flooding is the most common and most expensive natural disaster in the United States. It does not take much flooding to result in massive amounts of damage to a structure. Just 1 inch of water pooled in a single-story, 1,000 square-foot home can cause an estimated \$11,000 worth of damage; 1 foot of water in a 2,500 square-foot single-story home can cause more than \$29,000 in damage. Between 1996 and 2019, 99 percent of U.S. counties experienced a flooding event. Communities must be prepared to respond to flooding events and evaluate the damage that floods and other natural disasters cause to structures.

Defining Substantial Damage

Whenever a building in a mapped special flood hazard area is damaged from ANY source (flood, fire, wind, or human), the community must determine whether that structure has been “substantially damaged.” Substantial damage means that the cost of repairs equals or exceeds 50 percent (or a stricter, locally defined percentage) of the structure’s market value before it was damaged. Many communities track damage over a period of years and enforce cumulative substantial damage.

Communities that participate in the National Flood Insurance Program establish rules related to substantial damage by adopting a floodplain management ordinance, zoning/land use ordinance, or building codes.

The Value of a Substantial Damage Response Plan

The determination as to whether a structure has been substantially damaged is made at the local government level, generally by a building official or floodplain manager. In order to respond to events that result in substantial damage and to track the damage and subsequent improvements, it is recommended that communities develop a Substantial Damage Response Plan (SDRP).

Having a predetermined process to follow when a disaster event occurs is mission critical to the uniform application of a substantial damage management program. That process must take into account the capabilities of the community, identify the resources available, and draw upon a thorough understanding of the scale of damage that occurs. An SDRP should be simple, agile, and scalable.





Figure 1. Taking photos of a damaged home after a disaster event

Creating an SDRP

The National Flood Insurance Program does not require that a formal committee be established to prepare an SDRP, and the plan does not need to be adopted by the local government. However, an SDRP should be developed with the participation of the community, the floodplain administrator, the building department, and any other local officials involved with the substantial damage determination process. The general steps are as follows:

1. Assess the community's vulnerability to substantial damage.
 - a. Communities should establish the likelihood of substantial damage and where it is most likely to occur.
2. Identify the community's team for managing substantial damage to properties.
 - a. Communities should establish what staff are available to support substantial damage determinations.
 - b. Communities should establish what outside resources may be available to support substantial damage determinations and how to request assistance from these resources.
3. Identify post-event efforts related to substantial damage.
 - a. Communities should establish the process for substantial damage inspections and determinations.
4. Build a structure inventory database for substantial damage estimates.
 - a. Communities should develop a spreadsheet or GIS system to identify structures that are at risk for flood damage.
 - b. Communities should use the database to track substantial damage and substantial improvements.
5. Identify action the community can take to address potential substantial damage.

- a. Communities should identify the appropriate mitigation actions that can be taken to address substantial damages and prevent future damage for substantially damaged properties and non-declared properties alike.
6. Determine implementation steps and procedures for updating the plan.
 - a. Communities should lay out the process through which substantial damage determinations will be made.
 - b. Communities should identify how the structure inventory database and the SDRP will be updated.