

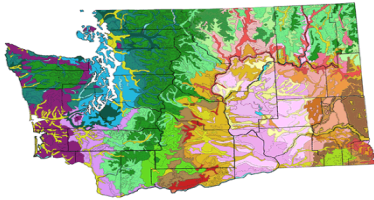


FEMA

Mitigation measures

Protect Your World From Natural Disasters

Resilient Communities Require Strong, Safe Construction



Too many communities within the United States are experiencing ever-increasing damage, financial loss and suffering from flooding, wildfires, wind and other natural hazards. While effective solutions are complex and vary by region and neighborhood, the most critical factors are where and how we build our homes, businesses and public infrastructure.

Logic and experience have taught us that flood-hazard areas, from time to time, will get wet. Fire-prone landscapes occasionally burn, and we will continue to be visited by severe winds, heat, cold, earthquakes, drought and other challenges. The important considerations are how we respond, recover and take action to limit future damage.

We build in risky locations for a wide variety of reasons. The natural resources of the area may provide some people with a livelihood. Others enjoy recreational opportunities or just admire the beauty. There are good reasons, though, to take some steps to plan and regulate where and how new structures are built. We also often need to address issues of repetitive damage to existing buildings that are in harm's way.

Several national policies promote wise regulation of high-hazard areas. One example is the National Flood Insurance Program (NFIP). It was designed to help reduce risk, in part, by encouraging establishment and enforcement of local floodplain management ordinances.

Under NFIP rules, new construction in flood-



After flood damage and repair, this home was elevated on sturdy concrete piers

prone areas must be elevated or flood-proofed. Additionally, when older buildings in flood zones are substantially improved or substantially damaged by flooding or other causes, community officials and property owners must work together to develop solutions that reduce risk and meet current codes. (*See the link in the box below for technical details about NFIP substantial improvement/substantial damage rules.*)

Over time, all of this helps to break the costly cycle of damage, repair and repeat damage that is so detrimental to entire communities. Adopting policies that exceed the minimum NFIP requirements brings an even greater degree of safety, along with significant insurance rate savings.

Requiring disaster-resistant construction through building code adoption and enforcement is another important way to reduce risk. The decision to build beyond minimum code standards can also provide enormous benefits.

There are countless design options that add strength, durability and safety to the construction of homes, businesses and

infrastructure. While they add slightly to the initial cost, these investments can prevent devastating financial loss and suffering. On average, hazard mitigation investments have demonstrated a return of \$4 for each dollar invested. Better, stronger, safer construction can benefit entire communities.

Everyone likes good news and success stories: Elevated structures help avoid damage in flood zones. Adding extra "freeboard" to the design further improves the odds (and brings lower flood insurance rates). Fire-resistant roofing, eaves, siding, patios, landscaping and other details, combined with a perimeter of defensible space, reduce the risk of fire losses. Wind- and earthquake-resistant building techniques are effective and affordable. All of the above save lives and property!

FEMA P-758, Substantial Improvement/ Substantial Damage Desk Reference (2010)

<http://www.fema.gov/media-library/assets/documents/18562>