

# NIST Special Publication 1190GB-8

## Guide Brief 8 – Overcoming Myths about Community Resilience Planning

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# Guide Brief 8 – Overcoming Myths about Community Resilience Planning

Applicable Section(s) of Guide: Volume 1, Section 1.5, Develop a Plan for Community Resilience, p. 16

Guide Briefs supplement the *Community Resilience Planning Guide for Buildings and Infrastructure Systems (NIST SP1190)*

## Purpose and Scope

Communities constantly work to improve their social, economic, and environmental well-being. Preparing for low-probability high-consequence hazard events can be challenging since immediate needs often take precedence over future events. At such times, community resilience planning and preparation pays large dividends.

This Guide Brief offers perspectives regarding frequently expressed concerns about community resilience planning. It addresses the concerns about resilience planning by providing information and data that demonstrate that resilience is a worthwhile and necessary aspect of community planning efforts. The primary intended audience for this Guide Brief is the community leadership team.



## 1. Introduction

Communities are increasingly recognizing the value and necessity of community resilience planning [NLC 2016, 100RC 2016, NIST 2016]. The *National Planning Frameworks* [DHS 2016], which set out organizational responsibilities for federal, state, and community levels, recognizes communities as the primary respondent for resilience plans and actions. Increasing numbers of communities are interested in working to improve their resilience to hazard events through improved mitigation, emergency response, and recovery.

Communities often begin resilience planning as a result of some triggering event, such as a damaging hazard event or credible prediction of such an event. However, it can be difficult to get buy-in from

**Myth - A serious hazard event has never occurred here and it will not happen in my lifetime.**

stakeholders for community resilience planning due to competing priorities or a perception that a significant hazard event is unlikely to occur (e.g., it has never happened here before). Some of these perceptions and other common myths, which can become barriers to broad community acceptance and participation in community resilience planning, are addressed below.

**2. Myth - A serious hazard event has never occurred here and it will not happen in my lifetime.**

Dozens of damaging hazard events occur every year across the nation, but several years or even decades may pass between significant events in any one community. The lack of a recent event in or near their community can lead people to believe that their community is somehow immune to significant disruption. Unfortunately, this is not the case. Figure 1 shows the distribution of 2019 Presidential Disaster Declarations over the 50-year period between 1964 and 2014. Most of the damage came from floods, severe storms, hurricanes, and tornadoes. Severe storms can include hazardous conditions produced by thunderstorms, including damaging winds, tornadoes, large hail, flooding and flash flooding, and winter storms associated with freezing rain, sleet, snow and strong winds [DHS 2017].

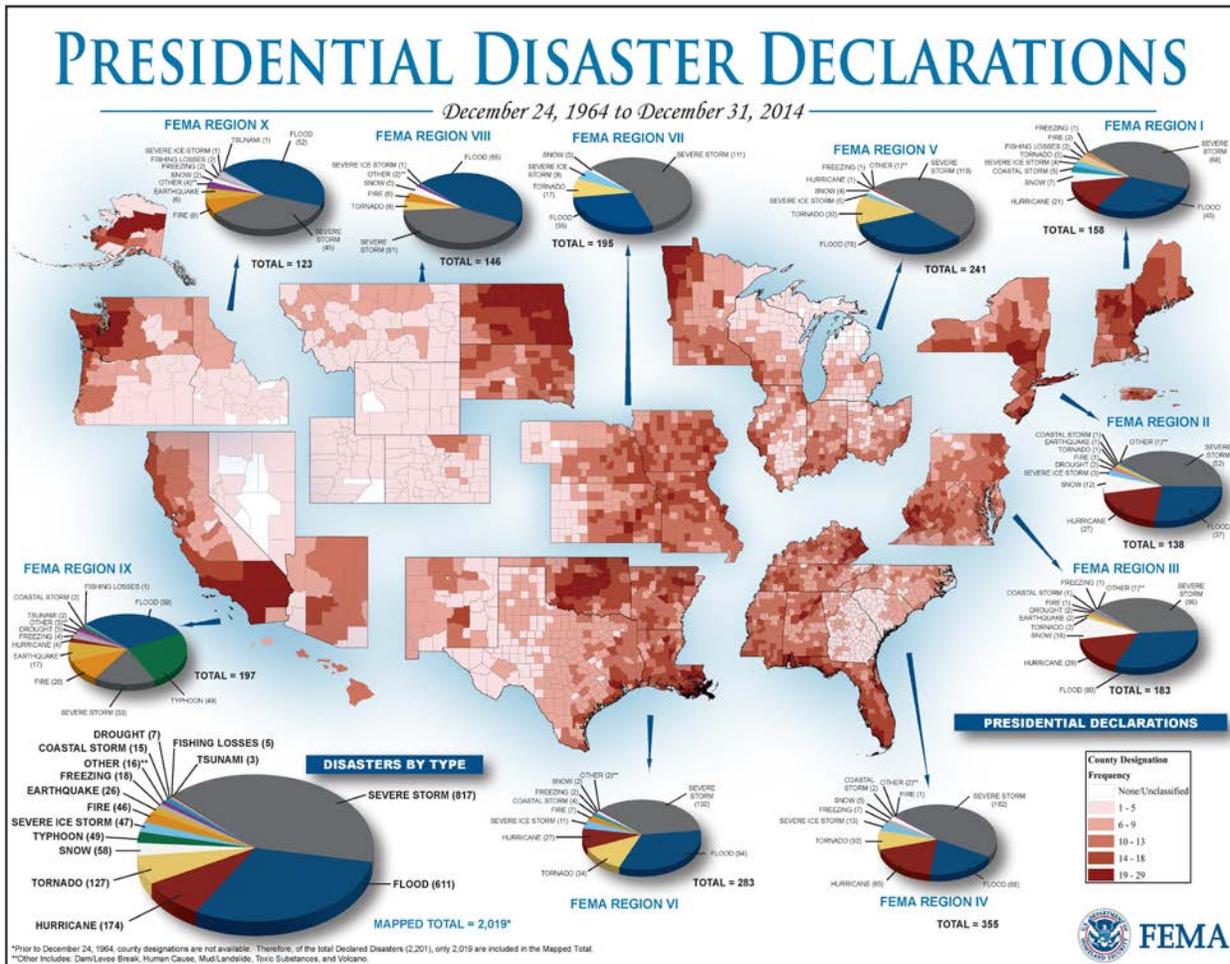


Figure 1. 50 years of Presidential Disaster Declarations illustrate that disasters can occur anywhere. [FEMA 2016].

**- There is no political will to address these complicated problems and their controversial solutions.**

Scientific research and data from past events have enabled researchers to better understand the hazard, likely damage, and consequences communities face for a range of hazards. There are many sources for information on the likelihood and severity of hazard events that may affect a community. National model building codes provide minimum design and construction criteria for life safety and other considerations for many hazards. The national model building codes are based on standards developed by professional organizations that address structural design criteria and hazards. For instance, the American Society of Civil Engineers (ASCE) Standard 7, *Minimum Design Loads for Buildings and Other Structures*, is referenced by Section 4.1.3 of the Guide which is used as a basis for establishing design levels for hazards. The Guide also discusses hazards each community may face, including some that are not as comprehensively addressed in ASCE 7 [ASCE 2010] or other codes and standards.

With regards to perceptions of ‘not in a lifetime’, many individuals may use this criteria for determining acceptable risk. For instance, a building is typically expected to function for decades, and whether there is one or multiple owners, the performance criteria remains the same. Consider then that there is a 40 % chance of a 100-year design-level hazard event occurring over a 50-year period. So, even though a 100-year design hazard, such as a flood, has a 1 % chance of occurring each year on average, the probability of a design hazard event occurring during the planned service life of the building can be quite substantial. The hazard frequencies and intensities required for the design of buildings and infrastructure systems is an important aspect of community resilience planning.

**3. Myth - There is no political will to address these complicated problems and their controversial solutions.**



**Figure 2. Local champions sponsored a workshop to encourage resilience planning in Utah [Utah 2016].**

Planning for community resilience is sometimes initiated by a grass roots effort, such as those in California, Oregon, Washington, and Utah. In each case, a small group of local champions initiated community-wide messaging about needs and opportunities. Such efforts may start after hazard events occur in other areas, when the media is eager for stories about what could happen at home. It is difficult to predict where support for resilience will emerge in a community. Champions understand local issues and their messaging resonates with community interests, providing a rallying point. Sources may include proponents for improving business, education, or healthcare, or those involved with community planning and construction.

Local champions may find support from ongoing activities and documents in national organizations that focus on resilience. Some examples for the built environment include the American Society of Civil Engineers, American Planners Association, International Association for Emergency Managers, and the American Institute of Architects. Examples for social and economic issues include the

American Public Health Association, National Association of Development Organizations, National League of Cities, and National Association of Counties. There are many other organizations that are addressing the built environment, social and economic issues, and other topics related to community resilience that may be helpful.

Community resilience planning does not require communities to develop a new, separate plan from existing comprehensive, development, or economic plans. Rather, communities can develop tailored



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### **Budgets are tight, we are short of staff, and we cannot afford to spend the time or money on resilience projects.**

resilience goals, evaluate and align their existing plans with the community resilience goals, and then integrate the resilience goals into existing plans.

Over 25 000 communities have developed and filed hazard mitigation plans with the Federal Emergency Management Agency (FEMA). These plans include a list of infrastructure projects that will improve community resilience and may receive recovery funding after a hazard event occurs. Communities should consider whether these mitigation projects can provide solutions for their community resilience goals, especially if they make a difference to the community both before and after a hazard event.

Many communities have emergency response plans and dedicated emergency management staff. With their understanding of hazard events and the damage and consequences that can occur, emergency managers are key partners for community resilience planning – and may be local champions. Emergency managers primarily focus on mitigation planning and an immediate response to ensure life safety during the critical hours and days after a damaging event. These plans are an important aspect of community recovery planning. However, many emergency response plans do not address long-term recovery of physical infrastructure systems and associated social and economic functions. Integration of emergency response plans with comprehensive resilience planning will improve community resilience.

Communities can start resilience planning by addressing projects that are easy to implement as early steps and successes toward a more resilient community, and to develop momentum for continued community resilience efforts. Continuous messaging to the community about resilience plans, and ongoing priority programs and projects, raises awareness, increases community understanding, and can generate grass roots support.

#### **4. Myth - Budgets are tight, we are short of staff, and we cannot afford to spend the time or money on resilience projects.**

The six-step process outlined in the Guide is about community resilience planning, from preparedness to recovery, not just mitigation. Most communities are already addressing some of these topics, but perhaps without a coordinated, comprehensive approach. The six-step process is powerful because it engages key stakeholders to agree on resilience goals, and then looks at how the existing plans might be improved and coordinated for better outcomes. This type of planning can identify opportunities for improvements that do not require new funds, may identify administrative solutions for long-term benefits, and may redirect some existing funds to meet gaps identified through a comprehensive assessment.

Communities can apply the Guide at various levels, beginning with a high-level view that leads to identifying community resilience goals that can be addressed through combinations of administrative and construction solutions. Administrative solutions, such as future permitting and construction, generally relate to policies and programs that do not require significant funding and can provide long lasting improvements. Construction solutions can be addressed in the capital plan, by policies that encourage improvements to privately owned buildings and infrastructure, and through recovery projects possibly aided by HUD CDBG-DR or FEMA funds. The Economic Decision Guide [EDG 2015] can assist communities with evaluating proposed construction solutions for their resilience benefits and alignment with community resilience goals.

There is a growing recognition that improving resilience on a community-scale creates value and benefits, or a resilience dividend, even if a hazard event does not occur. Community resilience planning can:

- Enable individuals, communities, and organizations to better withstand and recover from a disruption more quickly and effectively.
- Lessen the impact of chronic stresses – like crime, poverty, and unemployment – by improving a community’s ability to maintain essential functions.



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### Myth - Our emergency operation plans will lead to a successful recovery.

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- Improve the attractiveness of a community to residents and businesses alike by increasing the likelihood of continuity in the face of a hazard event, or creating public park or recreation spaces in flood-prone areas.

A resilience dividend improves a community's value even in the absence of a hazard event as investments for *future* resilience yields *current* direct economic benefits (e.g., public use spaces that increase community attractiveness and decrease hazard impacts on the community).

### 5. Myth - Our emergency operation plans will lead to a successful recovery.

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Most emergency plans primarily focus on rescuing victims, providing food, shelter, and healthcare immediately after a hazard event, and other urgent community needs, such as availability of emergency power and safe transportation routes, clean water, and operational wastewater systems. These critical short term needs must be met to start recovery, but communities need more to support a long-term, permanent recovery of physical infrastructure and social and economic systems.

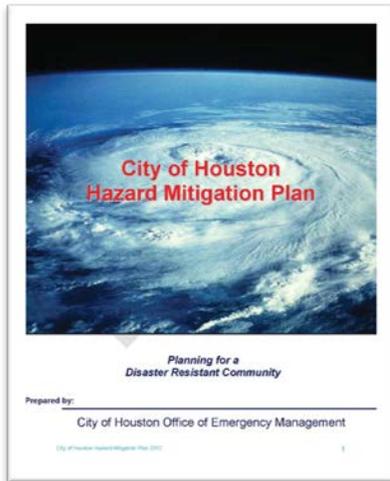
Without a community resilience plan, there may be a lack of clarity about the potential extent of damage and disruption to the community, where obstacles to recovery might occur, how long the recovery may take, or how to minimize the social and economic impacts of a lengthy recovery. Additionally, public and private owners of facilities and infrastructure systems will independently plan their own recovery unless they are part of a community resilience plan. For example, home and apartment owners may choose to not build or retrofit their residences to the shelter-in-place criteria given in the resilience plan. As a consequence, during a hazard event, there may be many more residents who need emergency shelter and interim housing. These demands on the community may overload the emergency response capacity and lead to a prolonged recovery as housing is rebuilt. The workforce needed to restore the economy may not remain in the community without adequate housing.

The Guide provides a process for determining (1) the desired community performance goals for recovery of community functions after a hazard event, (2) the anticipated performance of existing building clusters and infrastructure systems for prevalent hazards, and (3) the gaps between desired and anticipated performance. This information is used to develop administrative solutions and construction projects to improve community resilience.

### 6. Myth - We just updated our FEMA Hazard Mitigation Plan. We are covered.

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With passage of the Disaster Mitigation Act of 2000, the Stafford Act now requires state, tribal, and local governments to develop and adopt FEMA-approved hazard mitigation plans as a condition for receiving certain types of non-emergency disaster assistance. The plans can help reduce risks and create safer, more resilient communities by identifying local policies and actions that will reduce future losses from hazards.



**Figure 3. Community Resilience Plans can improve existing Hazard Mitigation Plans by incorporating the holistic perspective encouraged by the Guide [Houston 2012].**

The FEMA-approved hazard mitigation plans can contribute significantly toward increasing community resilience. These plans may identify key stakeholders, community risks, possible solutions, and regulations. However, hazard mitigation plans and projects may be limited in scope relative to those identified through comprehensive community resilience planning.

A community resilience plan can incorporate existing mitigation plans and possibly improve them with the holistic perspective encouraged by the Guide. The Guide process includes assessment of the existing situation and a rational look at the current capabilities and capacities of the built environment to meet the community’s social and economic needs following a hazard event. Further, it offers guidance for preparing a prioritized plan for closing the gaps between the desired performance needs and the current capabilities. A community resilience plan can improve the quality, consistency, and completeness of a community’s planning efforts, including mitigation plans, and can provide a prioritized path toward implementation.

**7. Myth - Our departments are already doing their own resilience planning.**

Communities routinely have multiple, concurrent planning efforts at the department level. At a minimum, these efforts are needed to support annual budget requests, including future plans and maintenance. For example, departments that are responsible for buildings and infrastructure systems need to budget for maintenance, capital improvement projects to maintain community services and support development, and mitigation or retrofit projects that improve resilience to hazard events. These types of plans support community resilience but they may lack coordination with other department plans, or have different goals. While these plans meet the needs of their department, a siloed approach may result in inconsistent goals, an incomplete understanding of interconnected dependencies between systems, and resources being applied to issues that are not priorities for improving community resilience.

The six-step process in the Guide can improve consistency and coordination between departments. Once community resilience goals are established, departments can coordinate with community leaders and stakeholders, solicit their input on existing conditions and capabilities, and set desired performance goals for their systems that are compatible with the desired community recovery actions and resilience goals. Such plans may include short-term needs for critical facilities and emergency housing, intermediate needs related to housing, neighborhoods, and local businesses, and long-term needs related to overall community recovery.

## 8. Myth - We do not need another plan on the shelf that just collects dust.



**Figure 4. Relocating housing out of a floodplain and preventing new construction in floodplains is a key administrative solution [FEMA 2009].**

If a community resilience plan is completed in one afternoon in a closed room by a half dozen people who have limited understanding of a community’s social and economic institutions and the built environment, the resulting plan will likely not be accepted by key stakeholders, and instead, will sit on a shelf and collect dust. Community plans are accepted and implemented when they are developed with a transparent, comprehensive approach with participation by all key stakeholders.

Community resilience planning creates an awareness of the vulnerabilities in a community, provides a systematic way to set goals and prioritize what needs to be done, and allows for continuous improvement through both administrative and construction solutions.

The Guide provides a transparent, comprehensive six-step process that includes stakeholder groups in the community. This approach yields a community resilience plan that is broadly understood and accepted, and provides guidance for planning efforts of community departments and various community public and private agencies, institutions, and businesses. Continued transparency in community resilience plans, progress, and modifications keeps the plans relevant and up-to-date.

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