

NATIONAL RESILIENCE GUIDANCE — NATIONAL ENGAGEMENT DRAFT

The Federal Emergency Management Agency (FEMA) is seeking feedback from the whole community on the draft National Resilience Guidance.

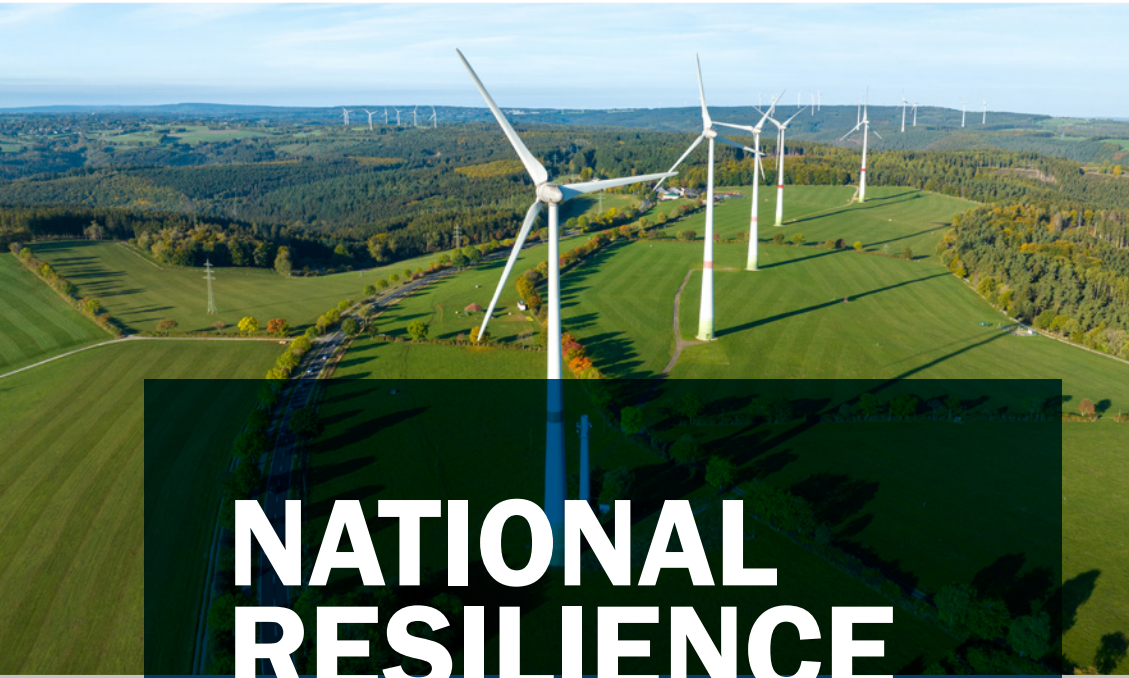
This national engagement period provides whole community stakeholders the opportunity to review the draft guidance and provide feedback for FEMA's consideration prior to finalizing the guide.

Comments should be returned to national-resilience@fema.dhs.gov using the provided comment matrix by close of business on May 23, 2024. The comment matrix and a copy of this document are available at <https://www.fema.gov/emergency-managers/national-preparedness/plan/resilience-guidance>.

During your review, please keep in mind:

- This guidance is intended to provide all individuals, communities, and organizations with a foundational understanding of resilience and how to strengthen resilience.
- The definition of resilience and resilience principles are drawn from the National Security Council's National Resilience Plan.
- Resilience is a big and complex topic and providing comprehensive guidance would result in a very large document. In an effort to keep the document a reasonable length, this document:
 - Is intentionally high level and does not dive deeply into specific aspects of resilience. Instead, it provides a broad overview.
 - Does not include case studies or links to other resources. Those will be provided as separate supplemental documents.
 - Will be supplemented by additional resources related to strengthening resilience, including case studies, toolkits, and guidance documents that dive deeper into some of the concepts from this guide. We intend to share those, along with links to the many existing resilience resources from across the government and whole community, on a webpage when this guidance is published.
- This document is not specific to emergency management or the traditional preparedness mission areas of prevention, protection, mitigation, response, and recovery. It is not specific to a sector or discipline. It is cross cutting and intended to represent the breadth of resilience.
- While development of this document is being spearheaded by FEMA, it is an interagency development effort with significant whole-community engagement.
- Development of this document has been informed by:
 - Listening sessions conducted with more than 650 whole-community stakeholders.
 - More than 80 individual stakeholder meetings with state, local, tribal, territorial, and federal organizations, associations, nonprofits, and foundations.

In addition to feedback on the guide, FEMA is seeking real-world case studies and other materials that can be included as supplemental resources. Please send suggested stories and resources to national-resilience@fema.dhs.gov for consideration.



NATIONAL RESILIENCE GUIDANCE

A Collaborative Approach to Building Resilience

APRIL 2024 — NATIONAL ENGAGEMENT DRAFT



FEMA

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LETTER FROM THE ADMINISTRATOR

PLACEHOLDER

INTRODUCTION

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The United States today faces an increasingly complex set of challenges. Disruptions from a range of acute incidents (also called shocks), such as natural disasters, pandemics, cyber and physical attacks, infrastructure failure, and sudden loss of key industries, are becoming more frequent and intense. Additionally, long-term strains on our communities (also called stressors), such as deteriorating infrastructure, environmental degradation, extreme weather, social injustice, lack of affordable housing, food insecurity, and persistent poverty, negatively impact quality of life and well-being, worsen the impacts of shocks, and undermine our ability to thrive. Together, shocks and stressors have significant impacts on our security, economy, environment, and social and physical well-being. However, by understanding these challenges and applying a unified, whole community approach to addressing them, we can strengthen our collective security and resilience so that we can overcome these ever-evolving challenges and also thrive as a nation.

22 **UNDERSTANDING RESILIENCE**

23 Resilience can be defined and approached in many
 24 ways. For the purposes of this guidance, resilience is
 25 “the ability to prepare for threats and hazards, adapt
 26 to changing conditions, and withstand and recover
 27 rapidly from adverse conditions and disruptions.”¹
 28 With the interconnected and ever-evolving nature of
 29 people, places, and systems, strengthening
 30 resilience requires a collective approach—one that
 31 includes all sectors and disciplines, all levels of
 32 governments, the private and non-profit sectors,
 33 academia, communities, families, and individuals,
 34 and that considers all facets of resilience such as
 35 climate, ecosystem, social, economic, infrastructure,
 36 and disaster resilience and their interdependencies.
 37 Strengthening resilience also requires that we build
 38 capacity and capability that benefit and protect
 39 communities, create integrated, multi-objective
 40 solutions that comprehensively address shocks and
 41 stressors, and position people, places, and systems
 42 to adapt and evolve in ways that support resilience
 43 for current and future generations.

44 **Key Terms**

45 **Shocks** are generally short-duration, rapid-onset or
 46 acute events that cause a disruption to normal life.

47 **Stressors** are chronic, slow-onset or longer-term
 48 conditions that weaken a community over time and
 49 can impact community functions and well-being.

50 **Threats** include capabilities, intentions, and
 51 attack methods of adversaries used to exploit
 52 circumstances or occurrences with the intent to
 53 cause harm. A threat is directed at an entity, asset,
 54 system, network, or geographic area.

55 **Hazards** are a source of actual or potential harm or
 56 difficulty. Unlike threats, a hazard is not directed.

57 The terms shock and stressor are commonly
 58 used in the field of resilience. Other related fields
 59 often use the terms threat and hazard. These four
 60 terms are related but look at things from different
 61 angles. Shocks and stressors are distinguished
 62 primarily by duration, while threats and hazards are
 63 distinguished primarily on intentionality.

SCOPE AND AUDIENCE

64 This Guidance is intended to help all individuals,
 65 communities, and organizations understand our
 66 nation’s [Vision](#) for resilience, the key [Principles](#) that
 67 must be applied to strengthen resilience, and the
 68 [Resilience Players](#) and [Systems That Contribute](#)
 69 [to Resilience](#). It also outlines [How to Strengthen](#)
 70 [Resilience](#) by organizing and engaging the right
 71 people, incorporating resilience concepts into
 72 planning efforts, creating change through policies,
 73 prioritizing projects and programs, financing projects,
 74 and measuring and evaluating resilience. Finally, this
 75 Guidance includes a [Resilience Maturity Model](#) that
 76 illustrates stages in the evolution of a community’s
 77 approach to resilience.
 78

79 While disasters are often a catalyst for resilience
 80 efforts across the nation, enhancing resilience
 81 requires collective effort that includes, but extends
 82 beyond, emergency management, preparedness, and
 83 the missions of prevention, protection, mitigation,
 84 response, and recovery. As such, this Guidance is not
 85 aimed solely at emergency management or any other
 86 specific sector or discipline, nor is it meant to be only
 87 for government or any particular type of organization
 88 or community. Rather, it is intended to establish a
 89 collective understanding about resilience and drive
 90 collective action. Furthermore, resilience does not
 91 look the same for all communities, so this Guidance
 92 presents flexible approaches and ideas that can be
 93 tailored to the characteristics and needs of each
 94 individual, community, and organization.

95 Additional resources related to strengthening
 96 resilience, including case studies, toolkits, and
 97 guidance documents that dive deeper into some
 98 of the concepts from this Guide, are available at
 99 <insert URL when available>.

1 This definition is being set by the National Resilience Plan under development by the National Security Council. The document citation will be added when available.

VISION

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101 Strengthening resilience requires everyone working together toward our shared national vision of a future
102 where all people and communities can participate, thrive, and reach their full potential.

103 The national vision of resilience includes the following:

- 104 ■ **A resilient people** with optimal health and well-being supported through thriving community and social,
105 economic and financial, environmental, housing, infrastructure, and institutional systems. Everyone has a
106 sense of security, trust, and social connectedness and belonging that serve as the foundation for thriving
107 and resilient communities.
- 108 ■ **A resilient society** where empowerment and cooperation are fostered to support strong civic engagement
109 across the whole community, including underserved populations and youth. Effective, inclusive
110 governance, transparency, and equitable decision-making with meaningful opportunities for community
111 participation, provide the foundation for fulfilling a common vision. Resilience at all levels of government
112 directly results in people receiving essential services.
- 113 ■ **A resilient economy** that supports all members of society and facilitates achievement of well-paying
114 jobs that enable a high quality of life; prevention of illnesses, diseases, and injuries and their impact on
115 wellbeing; and accumulation of individual, family, and community wealth. Economies are built around
116 a diverse range of industries and draw on regional strengths and assets. Educational and workforce
117 development systems facilitate lifelong learning, support economic transition for workers and connect
118 the workforce to employers. Public-private partnerships and small businesses flourish, contributing to
119 mutually beneficial outcomes.
- 120 ■ **A resilient built environment** that supports a high quality of life while avoiding, minimizing, or
121 withstanding the impacts of shocks and stressors. There is affordable, safe, and accessible housing.
122 Critical infrastructure systems are robust, secure, adaptable, integrate nature-based solutions, and
123 support economic growth and innovation. Access to services and amenities, such as healthcare, food,
124 green space, transportation, energy, and broadband, is equitable. Land use, building codes, and
125 development standards consider current and future risks and impacts.
- 126 ■ **A resilient natural environment** with clean land, air, and water and intact, healthy ecosystems that
127 can adapt to and withstand shocks and stressors. The strong health and long-term sustainability of the
128 environment supports the built environment, economy, society, and community health and well-being of
129 current and future generations.



PRINCIPLES

131 Our nation is a constantly evolving, interconnected web of diverse people and communities supported by
 132 complex systems of services and natural and built infrastructure. Strengthening resilience requires a multi-
 133 pronged approach and dedicated effort across the whole community. The following seven principles set the
 134 foundation for creating a more resilient nation.



ALL THREATS AND HAZARDS

Identify, prepare for, resist, and respond to shocks and stressors, prioritizing those that represent the greatest risks



HUMAN-CENTERED

Position the well-being of individuals, families, communities, and society at the center of resilience goals, taking into consideration the needs of all community members, including those that are most vulnerable and have been underserved and/or historically marginalized or disadvantaged.



EQUITABLE

Increase access to services and benefits to underserved and historically marginalized or disadvantaged communities that often bear a disproportionate burden of impacts and costs incurred through decisions made by both public and private actors.



ADAPTIVE

Maintain awareness of and a willingness to apply innovative thinking, tools, and methods to implement solutions that are flexible and can adjust to new conditions over time.



COLLABORATIVE

Seek input that engages and empowers the public, private, academic, and non-profit sectors, reflects shared commitment to collective deliberation, and utilizes transparent processes, metrics, and goals for data-driven decision making.



SUSTAINABLE

Implement solutions that serve current and future needs by considering the entire life cycle of solutions.



INTERDEPENDENT

Apply risk-informed approaches that account for the complexity and interdependencies of systems, prioritizing solutions and investments that address multiple objectives across systems resulting in additional positive effects and increasing the total benefit to society and the environment over the long-term.

RESILIENCE PLAYERS

136 Resilience requires collective action by all individuals, communities, and organizations. Everyone plays a role.



Individuals, Families, and Households

- Prepared and engaged individuals, families, and households are the foundation of a resilient community. Their resilience strengthens the resilience of those around them and vice versa.
- Everyone can strengthen their resilience—even small changes make a difference. For example, make a disaster plan, safeguard critical documents, build relationships with neighbors, purchase insurance.
- It is also critical for individuals, families, and households to contribute to broader community resilience efforts. Providing input helps ensure solutions meet the needs of community members.



Communities

- Formal communities like neighborhood associations, school communities, and congregations, and informal communities like neighborhood friends, book clubs, and parent groups play essential roles in strengthening resilience. They bring people together, enable them to share information and resources, and inspire action.
- Shared community spaces are vital to strengthening resilience. They are places where informal but crucial connections are made that build a sense of community and help create common ground among diverse groups.
- Communities can strengthen resilience by directly supporting their community members, as well as by representing the needs of their community members in broader resilience efforts.



Nongovernmental Organizations

- Organizations such as nonprofit, community, voluntary, faith-based, arts/cultural, and advocacy organizations, philanthropies and foundations, national and professional associations, and educational institutions help strengthen resilience by providing needed services and support to communities.
- They are often uniquely positioned to understand the strengths and challenges of the community, including the resilience (or lack thereof) of critical systems, such as housing, food, and transportation.
- They are frequently trusted sources of information and can help build awareness of resilience efforts and actions that people and communities can take to strengthen their own resilience.
- They can strengthen the resilience of the community by augmenting government efforts; providing services, training, and education; connecting people to assistance programs; and supporting social capital and strong social networks.



Businesses

- Business enterprises, including small or local businesses, large corporations, healthcare providers, childcare providers, and other private sector service providers are integral parts of the community. Their resilience strengthens community and national resilience by helping to sustain economic vitality and ensuring the continued delivery of goods and services both before and after a disaster.
- As the owners and operators of most of the nation's infrastructure, businesses are essential to improving resilience through planning and long-term risk reduction. Investments in continuity and risk reduction have benefits to the companies themselves, their employees, and the communities they touch.



Governments

- All governments are responsible for the public safety, security, health, and welfare of the people in their jurisdiction. Through their capacity to adopt and enforce laws, prioritize and allocate resources, and provide technical and financial assistance, they can promote and strengthen resilience in their jurisdiction.
- They can strengthen resilience by integrating resilience principles and priorities into their planning; adopting resilience standards for new and existing infrastructure; assessing policies and how modifications can address stressors; implementing practices to ensure continuity of government; and coordinating cross-jurisdictional action.

SYSTEMS THAT CONTRIBUTE TO RESILIENCE

138 Many interconnected systems support communities, but six have particularly strong connections to the
 139 health, safety, well-being, and prosperity of communities and a significant impact on resilience. Each system
 140 includes individual assets that work together and are interconnected with and reliant on other systems to
 141 operate. Given this interconnectedness, strengthening resilience requires applying systems thinking—looking
 142 at the complex world relationally rather than just looking at its individual parts.

Environmental Systems

Resources and activities that preserve and manage ecosystems, reduce environmental degradation, and ensure communities can realize ecosystem benefits like risk reduction and public health enhancement.

EXAMPLE ORGANIZATIONS

Natural resources/environmental/conservation agencies and organizations; parks, recreation, and open space agencies.

Community & Social Systems

Relationships, groups, structures, and activities that address the cultural, psychological, behavioral, health, and social needs of individuals and communities and support strong social capital.

EXAMPLE ORGANIZATIONS

Public health and social services, educational institutions, faith-based organizations and houses of worship, arts and cultural organizations, parks and recreation.

Economy & Financial Systems

Activities that support, facilitate, and provide opportunities for meaningful work and enhance the overall prosperity of communities.

EXAMPLE ORGANIZATIONS

Economic and workforce development agencies and organizations, business associations, and financial institutions.

Infrastructure Systems

Includes all the buildings and man-made and natural physical assets that support the functioning of communities, economies, and society, provide essential services, and ensure public health and safety.

EXAMPLE ORGANIZATIONS

Public works, transportation, utilities and regulators (e.g., energy, water, sewer), communications, and critical infrastructure owners and operators.

Institutional Systems

Activities that provide leadership, coordination, and decision-making, coordination across organizations to support the functioning of communities and the well-being of people.

EXAMPLE ORGANIZATIONS

These activities rely on partnerships across the community, nongovernmental organizations, businesses, and government.

Housing Systems

Physical structures and supporting agencies and organizations that provide shelter for individuals, families, and households.

EXAMPLE ORGANIZATIONS

Housing agencies and authorities, housing developers and builders, land use and building officials, insurance companies, banks and other financial institutions, homeowner and neighborhood associations.



Multi-System Resilience In Action

Nature-Based Solutions and Reconnecting Communities

Protect critical transportation infrastructure by leveraging nature-based solutions, including habitat restoration to improve water quality and reduce flooding risk. Incorporate parks and community spaces to bring together arts, culture, and economic opportunity. Leverage public private partnerships and multiple funding sources.



Housing, Transit, and Energy

Develop mixed-income housing, co-located with access to transit that takes residents to work and other community amenities. Incorporate distributed energy resources to lower utility costs and reduce disruptions during disasters.



HOW TO STRENGTHEN RESILIENCE

144 **“(R)esilience cannot be accomplished by simply**
 145 **adding a cosmetic layer of policy or practice to a**
 146 **vulnerable community. Long-term shifts in physical**
 147 **approaches (new technologies, methods, materials,**
 148 **and infrastructure systems) and social practices**
 149 **and initiatives (the people, management processes,**
 150 **institutional arrangements, and legislation) are**
 151 **needed to advance community resilience.”²**

152 There are many ways to strengthen resilience
 153 and every community’s journey will be different.
 154 However, for every community, no matter how
 155 big or small, developing a good understanding
 156 of the community’s shocks and stressors is a
 157 foundational step. From there, communities can
 158 weave [resilience considerations](#) into their existing
 159 activities and planning efforts so that decisions
 160 prioritize activities that strengthen resilience, and/or
 161 pursue dedicated resilience initiatives focused on
 162 strengthening resilience in specific ways.

UNDERSTANDING YOUR SHOCKS AND STRESSORS

163 Strengthening our security and resilience requires
 164 that we consider all threats and hazards and
 165 prioritize actions based on short-term and long-term
 166 risks. While threats and hazards are often thought
 167 of in terms of shocks, such as natural disasters,
 168 pandemics, and cyber and physical attacks, they
 169 also include stressors, such as persistent poverty,
 170 homelessness, and deteriorating infrastructure.
 171 Stressors are often overlooked when considering
 172 risks, as their impacts can be more subtle than
 173 shocks and may be left to the community to
 174 absorb. However, both shocks and stressors must
 175 be addressed in resilience efforts. Stressors, just
 176 like shocks, can have significant impacts and far-
 177 reaching consequences. Additionally, stressors can
 178 amplify the impact of shocks and reduce the quality
 179 of life across the community.
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182 Shocks and stressors also need to be viewed through
 183 a future lens, considering how they may differ from
 184 what has been experienced in the past or are currently

185 experienced. For instance, a city may historically
 186 experience five days with a heat index above 95 but
 187 can expect to experience 24 days over that threshold
 188 by mid-century. As another example, due to steep
 189 increases in housing costs, the number of people
 190 experiencing homelessness has trended upwards and
 191 may be significantly higher in the future. Strengthening
 192 resilience requires that we anticipate and prepare for
 193 future conditions so that we can adapt and be well-
 194 positioned to respond and recover quickly.

195 Understanding your shocks, stressors, and the
 196 interactions between them is a foundational step for
 197 building resilience. Developing this understanding
 198 includes the following activities:

- 199 ■ **Identifying Shocks:** Shocks include natural
 200 hazards, human caused threats, and other
 201 short-duration, acute events that could result
 202 in significant impacts to a community or region.
 203 When identifying shocks, it is important to
 204 consider factors such as the location where the
 205 shock may occur, the potential duration and
 206 extent of the shock, and the likelihood that the
 207 shock may occur. Risk assessments included in
 208 local, state, tribal, or territorial hazard mitigation
 209 plans or emergency operations plans can provide
 210 a strong starting point for this kind of analysis.
 211 Additional research may be needed to understand
 212 future shocks and stressors.

Example Shocks

- 213 ■ **Hurricanes** 214
- 215 ■ **Floods** 216
- 217 ■ **Wildfires** 218
- 219 ■ **Earthquakes** 220
- 221 ■ **Adversarial attacks** 222
- 223 ■ **Supply chain failure** 224
- 225 ■ **Sudden closures of key industries or employers** 226
(e.g., military bases, mines, power plants).

2 ² The National Academies, *Disaster Resilience: A National Imperative*. 2021. Accessed February 26, 2024. <https://nap.nationalacademies.org/catalog/13457/disaster-resilience-a-national-imperative>.

222	■ Analyzing Risk, Vulnerability, and Potential Consequences: Once shocks are identified, it is important to determine how significantly they may impact systems, a community, or a region. Analyzing risk involves understanding the potential for damage or loss based on the interaction between the shock and community systems (for example, a flood impacting roads, bridges, parks, homes, businesses, ecosystems, and people). Understanding vulnerability involves evaluating the attributes of the community's systems that may make them susceptible to impacts from shocks, such as the presence of community development in flood-prone areas. Finally, determining potential consequences involves understanding how severe the impacts of the shocks would be to systems and the community as a whole. Analyzing risk, vulnerability, and consequences can be informed by existing emergency management and community plans and studies (e.g., hazard mitigation plans, comprehensive plans, continuity plans), as well as a range of available demographic (including social vulnerability), economic, and infrastructure data sources. Further, considering how future conditions will alter risk and vulnerability over time is important for identifying long-term and lasting resilience solutions.	
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250	■ Evaluating Chronic Stressors: Chronic stressors—long-term, persistent challenges—can weaken a community over time and can cause disruption to community functions and well-being. For example, deteriorating electric infrastructure can lead to more frequent outages and higher energy costs for households. A lack of affordable housing can further exacerbate income inequality and poverty, and lead to residential instability, which can have impacts on work and school performance as well as on physical and mental health. Chronic stressors not only affect day-to-day life, but also make communities more vulnerable to impacts from shocks. Communities can use qualitative data like the first-hand experience of their community members and quantitative data like a range of available demographic, economic, and infrastructure data sources, to better understand what stressors are present in the community, and how persistent and severe they may be.	
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	Example Stressors	270
	■ Declining education systems	271
	■ Declining industries	272
	■ Deteriorating infrastructure	273
	■ Diminishing social capital	274
	■ Drought	275
	■ Endemic crime	276
	■ Lack of quality affordable housing	277
	■ Persistent poverty	278
	■ Food insecurity	279
	■ Assessing the Interactions Between Shocks and Stressors: Understanding the interaction of shocks and stressors is critical. Looking at shocks and stressors together can help identify where the stressors could make the shocks worse and vice versa. Another way to think about the interaction of shocks and stressors is to consider cascading and compounding disasters. Cascading disasters are when one shock event leads to subsequent shock events. One example is an earthquake that causes the failure of a deteriorating dam, which then leads to downstream flooding. Communities with an overreliance on a single industry, such as tourism, can face more extreme job losses and business closures after such a shock than a community that has a more diverse economic base; in other words, an overreliance on a single industry can be a stressor that exacerbates the impact of a shock. Compounding disasters are when multiple events happen at one time or within a short timeframe. An example is a community that has a housing shortage and shelters that are near capacity, which is then hit by a natural disaster that displaces many people, which may lead to decreased population and tax base and a loss of social cohesion. Compounding disasters are often accompanied by stressors that can amplify negative conditions, circumstances, outcomes, and costs.	280
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310 Research and first-hand experiences show that
 311 shocks have a disproportionate impact on
 312 underserved communities because of historical and
 313 ongoing patterns of discriminatory political,
 314 economic, and social conditions.³ For example,
 315 people of color have experienced historical
 316 inequities in access to a range of social and
 317 economic benefits that have affected where they
 318 live, learn, work, worship, and play (also known as
 319 social determinants of health). Similarly, people
 320 who live in rural areas often must travel far
 321 distances to access jobs, stores, and health,
 322 educational, and social services. These factors,
 323 along with other social determinants of health,
 324 place these individuals at a greater risk of poor
 325 health outcomes and disaster outcomes. Taking
 326 steps to increase equity, and address chronic
 327 stressors that often further drive inequity,
 328 strengthens resilience of those individuals, their
 329 community, and the entire nation. Equity should be
 330 pursued intentionally and woven throughout plans,
 331 policy, and projects, consistent with applicable law,
 332 rather than viewed as a simple effort or single action.

Understanding shocks, stressors, and their interactions can help uncover collaborative and multi-objective approaches that can reduce the likelihood and severity of disruptions while simultaneously improving quality of life.

Executive Order (EO) 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

EO 13985 defines equity as “the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.”



3 Substance Abuse and Mental Health Services Administration (2017). *Disaster Technical Assistance Center Supplemental Research Bulletin Greater Impact: How Disasters Affect People of Low Socioeconomic Status* https://www.samhsa.gov/sites/default/files/dtac/srb-low-ses_2.pdf

FACTORING RESILIENCE CONSIDERATIONS INTO YOUR WORK

This Guidance provides a range of options for building resilience, from those that help a community or organization get started, all the way to large capital projects or programs. As a starting point, several meaningful steps can be taken without requiring or expending additional resources. It starts with building resilience concepts and principles into activities and business processes already underway. The following are examples of steps to take:

■ **Consistent Coordination and Collaboration:**

Building a collaborative culture within communities and across departments or organizations not only ensures that stakeholders have shared awareness of cross-cutting priorities, but also creates opportunities for collaboration and integration to tackle root causes of vulnerabilities. Coordination and collaboration require investment of resources. One way to increase coordination and collaboration is to form and provide resources to a collaborative group, like the Commonwealth of Virginia did with its Virginia Coastal Resilience Technical Advisory Committee. The committee comprises representatives from state agencies, coastal planning district commissions, regional commissions, academic advisors, and tribes and oversees development of Virginia’s Coastal Master Resilience Plan.

■ **Resilience Evaluation and Prioritization**

Criteria: Guided by the resilience principles, questions can be developed and incorporated into various community processes such as annual budgets, community planning processes, capital improvement plans, and project designs. The questions can also be used across disciplines (e.g., planning and transportation departments) to build consistency and integration. For example, the State of Colorado developed a set of prioritization criteria within the Colorado Resiliency Framework, which have further been operationalized by providing state agencies with guidance for how to use the framework prioritization criteria in operations and business processes. The simple process of asking resilience-informed questions can uncover opportunities that might not present themselves otherwise.

■ **Plan for Extremes:** Planning for a worst-case scenario fosters a culture of resilience as people, organizations, and institutions think on how they might respond in an extreme event. Continuity

plans detail how functions and services may continue in light of such an event and can be created for the continuity of government (COG), businesses, infrastructure, and institutions. Resilient institutions are able to provide continuity of their mission, which then promotes resilience within their communities.

■ **Maintain Updated Building Codes:** Building codes, including the suite of International Codes offered by the International Code Council, are designed to protect public health and safety and reduce risk from shocks. Codes can also address stressors, such as energy burden. A recent study shows that from 2000 to 2016, adoption and implementation of the International Building Code and International Residential Code provided \$27 billion in risk reduction benefits from floods, hurricane winds, and earthquakes. Regular review and updating of codes can ensure that communities are incorporating the most state-of-the-art techniques into building practices.⁴

■ **Meaningful Public Engagement:** Ensuring that processes such as budgeting and community planning have consistent, robust, and meaningful engagement and participatory decision-making can strengthen trust, social capital, and ultimately resilience. Meeting members of the community where they are, hearing their concerns, getting a clearer sense of their experiences and involving them in developing solutions can help identify strategies that are best tailored to address critical community challenges. For example, as part of a resilience planning effort, a community may hold a mix of public meetings including large town halls open to anyone, targeted meetings at houses of worship, and smaller meetings in people’s homes or neighborhoods. Engaging with young people who will have to live with the consequences of today’s actions is particularly important.

⁴ International Code Council, “Codes Save: Up-to-date Building Codes Support Safe, Sustainable and Resilient Communities.” Undated. Accessed March 13, 2024. <https://www.iccsafe.org/codessave/>.

439 **Incorporating Resilience Principles into Activities and Decision-Making**

440 The resilience principles provide one approach for incorporating resilience considerations into existing
 441 activities and decision-making, including the identification of resilience evaluation and prioritization criteria.
 442 Below are example questions for each principle that can be considered when making decisions about plans,
 443 policies, project, programs, and other efforts.

**ALL THREATS AND HAZARDS**

- What are the root causes or impacts of shocks and stressors and how are they being addressed?
- How is the relationship between shocks and stressors being addressed?
- Are future conditions being considered?

**HUMAN-CENTERED**

- How does the community envision resilience?
- Are the needs and well-being of people prioritized, especially those most socially vulnerable and/or historically underserved?
- Are the voices of people being sought, heard, and involved in decision-making, especially those most vulnerable and/or historically underserved?

**EQUITABLE**

- Are there intentional benefits for historically underserved communities, consistent with applicable law?
- Are there unintended consequences of decisions for historically underserved communities?

**ADAPTIVE**

- How will solutions perform in the face of changing environmental, social, economic, built environment, or climate conditions?
- Have lessons from previous efforts been incorporated and can you easily make ongoing adjustments as new information emerges?

**COLLABORATIVE**

- Are the decisions being made by a team with diverse representation?
- Have essential partnerships been identified?

**SUSTAINABLE**

- What are the impacts on social, economic, and natural and built environment resources? If there are negative impacts, how will they be minimized?
- How can decisions gain the political and financial support to be sustainable long-term?
- Have nature-based solutions that often provide co-benefits been seriously considered?

**INTERDEPENDENT**

- Have dependencies and interdependencies between systems been considered?
- What is the impact on other policies, plans, projects, or programs?
- Have solutions that offer co-benefits been prioritized?

444 **HOW TO DEVELOP AND IMPLEMENT**
 445 **RESILIENCE EFFORTS**

446 Many communities pursue dedicated initiatives to
 447 strengthen resilience. Successful resilience efforts
 448 can take many forms but often include the six
 449 elements shown in Figure 1. The activities and
 450 interaction among the elements may happen one
 451 after the other or at the same time, but the order will
 452 depend on the community. For example, in some
 453 cases a planning process may be the first step,
 454 followed by the development and implementation of
 455 policy. In other cases, policy may be a first step that
 456 lays the groundwork for planning. Likewise, the form
 457 these elements take will vary by community and may
 458 evolve over time as conditions change, including an
 459 increased understanding of what resilience means in
 460 that community. Appendix A presents a maturity
 461 model that illustrates how actions across these
 462 elements can increase resilience over time.

463 The approaches outlined in this document are
 464 flexible and account for the fact that efforts may
 465 focus on specific aspects of resilience and can and
 466 should happen at different scales, from hyperlocal
 467 like a neighborhood, to regional like a watershed or
 468 seismic zone, to national.

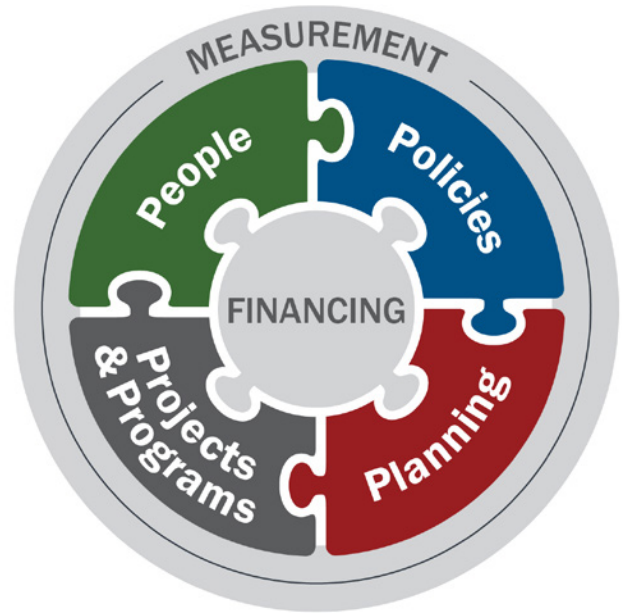


Figure 1. Elements for Strengthening Resilience





469 **Organizing and Engaging People**

470 Whether developing a plan, implementing a project or program, or taking some other action, resilience efforts
 471 require collaboration by many individuals with various types of expertise and experience across organizations
 472 and even across jurisdictions. One way to get the right players involved, while keeping things manageable, is
 473 to take a layered approach and to grow the team over time (see Figure 2).

- 474 ■ **Layered approach:** It may be beneficial to develop a smaller core team of key players, as well as a broader
 475 collaborative team that includes additional individuals with relevant and diverse expertise, knowledge,
 476 and/or experience. With this approach, the core team often does most of the work, while the broader
 477 collaborative team is frequently engaged and consulted. The most effective resilience efforts also engage
 478 members of the broader community.
- 479 ■ **Grow over time:** As more information is learned about the shocks, stressors, and issues facing the
 480 community, the team can consider what perspectives might be missing and seek out new members who
 481 can add that perspective.⁵

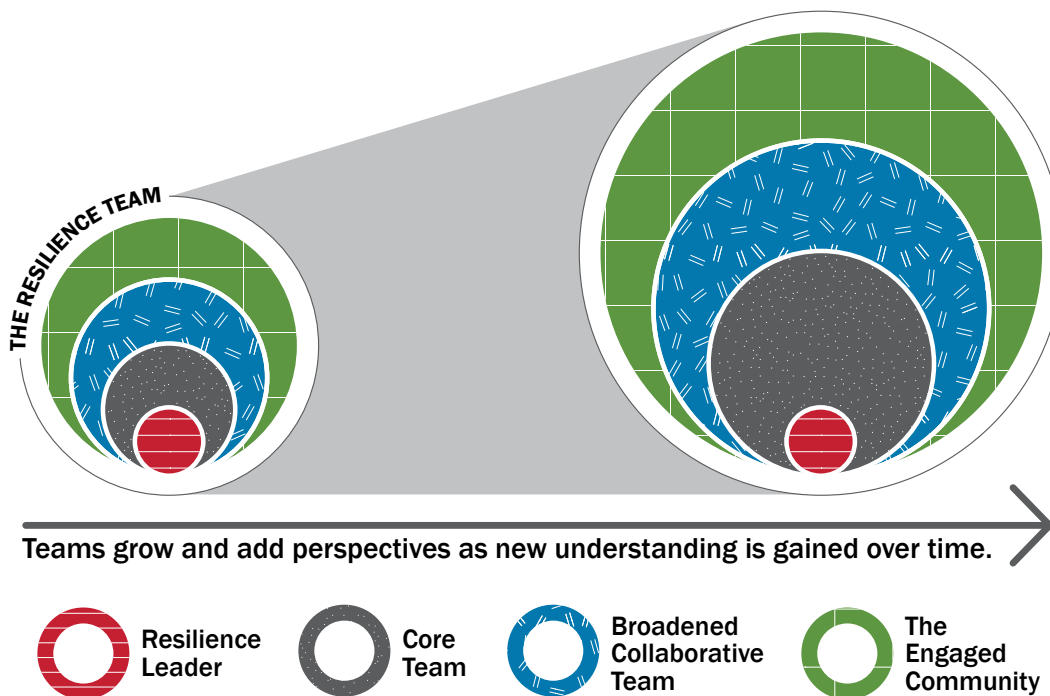


Figure 2. Team Model—Adapted from NIST 2020

5 NOAA Climate Program Office, *Implementing the Steps to Resilience: A Practitioner’s Guide*. October 2022. Accessed February 26, 2024. <https://toolkit.climate.gov/content/practitioners-guidance-implementing-steps-resilience>.

482 **RESILIENCE LEADERS AND CHAMPIONS**
 483 Strong and effective leadership is critical for
 484 resilience efforts to be successful, as is a core
 485 group of champions who can rally broader support.
 486 Resilience leaders and champions can take many
 487 forms. They may be found in families, households,
 488 neighborhoods, communities, government, private
 489 sector, and nongovernmental organizations. They
 490 may be a single person or a group of people. They
 491 may have formal authority conferred by an official
 492 body, informal authority conferred from community
 493 trust, or a mix of both. Regardless of the type of
 494 leader or champion, they play an essential role
 495 in getting widespread support for resilience and
 496 allocating resources towards those efforts. They
 497 direct the process, provide consistency, elevate the

importance of resilience, convene relevant parties,
 effectively communicate the goals and objectives of
 the resilience effort, and engage public support.

Across the nation, communities have used a variety
 of leadership models for their resilience efforts such
 as task forces, commissions, or working groups.
 One common approach in recent years has been to
 identify or create the position of a Chief Resilience
 Officer (CRO). Given that resilience is often spoken
 about in the context of disasters, another common
 approach is to have the emergency manager fill the
 role. In both cases, successful leaders have built
 strong partnerships and broad coalitions across
 organizations and disciplines.

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What is the difference between an Emergency Manager and a Chief Resilience Officer?

Emergency managers are generally responsible for executing the functions of comprehensive emergency management: preparedness, mitigation, response, and recovery, but the exact responsibilities depend on the context of the organization and community. Historically, emergency management has been rooted in public safety, with a strong orientation to managing shocks. Over time, the scope of the emergency manager’s responsibilities has widened in some jurisdictions to include engagement in some stressors. In some places, an emergency manager will largely focus on planning, training, exercising, and executing emergency operations, while in other places, the responsibilities may include long-term risk reduction and resilience. An emergency manager needs to be skilled at coordinating multiple entities towards a common goal, whether that be life safety or risk reduction, and aware of how shocks and stressors could impact their communities, including how stressors may impact the effects of shocks.

The role of CRO began appearing in state and local governments in the early 2010s. Generally, the CRO’s role has been to lead the development and implementation of a resilience plan and efforts for their jurisdiction, which requires a broad knowledge of the shocks and stressors present in the community along with the community’s capabilities and capacity. In addition, CROs have been responsible for leading efforts to incorporate resilience concepts and principles into other plans and initiatives. CROs are responsible for generating broad support for the resilience plan and subsequent actions by breaking down existing barriers to build coalitions among interested parties and facilitating engagement of partners in resilience efforts. Natural and human-caused hazards are likely to be a part of CROs’ portfolios but may or may not be the focus depending on the community. During the 100 Resilient Cities initiative, many CROs focused on broad issues like historic discrimination and inequality, urbanization, and people experiencing homelessness that would not typically be an emergency manager’s responsibility.⁶

CRO roles may be placed within existing departments, exist independently as part of a senior elected or appointed official’s office, or be a standalone entity within the organization. CROs generally have been placed at relatively prominent positions within the governance structure, often reporting to the chief executive (e.g., mayor, governor, department head).

In short, CROs often focus primarily on the long-term, building resilience and addressing the interplay of shocks and stressors, whereas emergency managers often focus primarily on preparing for and addressing shocks, while understanding the implications of stressors.

6 Urban Institute, *Evaluating Urban Resilience through the 100 Resilient Cities Program*. Undated. Accessed August 27, 2023. <https://www.urban.org/projects/evaluating-urban-resilience-through-100-resilient-cities-program>.



539 **BUILDING CORE AND BROADENED COLLABORATIVE TEAMS**

540 Resilience teams should reflect the composition, culture, and range of issues within the communities they
 541 represent. A successful resilience team requires continuous communication and decision-making that is
 542 inclusive, participatory, and transparent to all. Diverse voices from across the community should be included
 543 and have an active role in decision-making.

544 When thinking about who to include on the resilience team and how best to organize them, consider:

- 545 ■ **Purpose:** Why are people being brought together? 558
- 546 For example, are they sponsoring or conducting 559
- 547 research, identifying/understanding a community’s 560
- 548 need or priority, producing recommendations, 561
- 549 developing or evaluating programs?
- 550 ■ **Members:** Who should be included, and will 558
- 551 they be compensated either monetarily or 559
- 552 otherwise? How will engagement, especially from 560
- 553 underserved voices, be supported? 561
- 554 ■ **Administrative Effort:** What will be needed to 562
- 555 manage the team, including the number of staff 563
- 556 and needed skills (e.g., what skills are available 564
- 557 within a core team and what needs will come from 565
- 566 other places) and the resources needed to sustain 566
- 567 the team? 567
- 550 ■ **Authority:** What power do the decisions 562
- 551 of the people have? Are their decisions meant 563
- 552 to be informative to some other decision-maker 564
- 553 or authoritative? 565
- 554 ■ **Duration:** How long will people be asked to be 566
- 555 engaged? Will it be a short-term group established 567
- 556 with a defined deadline, or a long-term group that 568
- 557 provides ongoing support and guidance? 569

568 **ENGAGING THE COMMUNITY**

569 Effective resilience efforts require engagement of
 570 the whole community. Community participation is
 571 critical to identifying effective solutions, ensuring
 572 that community preferences and priorities can be
 573 fully integrated into resilience efforts, and in creating
 574 support for resilience initiatives. Understanding
 575 risks and identifying effective solutions requires that
 576 we recognize the unique needs of all community
 577 members and ensure their participation in decision-
 578 making, in particular those that are underserved,
 579 disproportionately impacted, and the most socially
 580 vulnerable. Their voices must be heard and respected
 581 and actions should honor their lived experience,
 582 history, and cultural practices and traditions. This
 583 is especially important in areas where Indigenous
 584 Peoples maintain place-based knowledge that
 585 holds thousands of years of sociocultural, economic,
 586 political, and natural resource relationships.

587 Engagement efforts can take many forms. For
 588 example, holding public events like planning
 589 charrettes, town halls, and listening sessions;
 590 conducting surveys through a variety of mechanisms;
 591 or doing extensive community outreach like booths
 592 at community festivals and attending existing
 593 community organization meetings to meet people
 594 where they are. Artists and artistic means of
 595 expression can be instrumental to bringing community
 596 voices into the process through interactive design
 597 and exhibits. Transparency can take the form of open
 598 meetings and widespread dissemination of public
 599 meeting summaries and reports documenting the
 600 work being done.

Developing a Community Engagement Plan

Central to resilience is the principle of collaboration
 and the importance of consistently including all
 voices, especially those of underserved communities
 and those most impacted by shocks and stressors.
 A community engagement plan should consider:

- Why is engagement needed? What purpose(s) does engagement serve (e.g., gathering community input, building trust)? How does the community benefit from the engagement?
- What previous engagements have occurred and how can the input and feedback from those engagements be leveraged?
- What does meaningful engagement look like? How are engagement efforts and outcomes measured?
- Who needs to be engaged and what data is being used to identify them, to ensure appropriate representation of the full composition of the community, particularly those that are disproportionately impacted?
- How will engagement, especially from underserved voices, be supported and resourced?
- When will engagement be needed?
- Where does the team need to go to empower community engagement?
- How can the team meet people where they are to make it easy for them to participate?
- What does the team need to budget (e.g., money, time, people) to enable meaningful community engagement? Where will the resources come from?
- What is the promise or commitment to the community as a result of the engagement?



- 633 Having a truly inclusive process requires an
 634 understanding of logistical, linguistic, cultural, and
 635 accessibility needs that should be addressed.
 636 Consider the following:
- 637 ■ Leverage relationships with diverse community
 638 leaders to make participants feel welcome to
 639 engage in the process.
 - 640 ■ Consider how opportunities can be created for
 641 community members to act as full members of
 642 the process and always have an open mind when
 643 engaging with different groups.
 - 644 ■ Use participation events to listen and learn from
 645 the community about what they value and
 646 changes that are most meaningful to them, not
 647 just to educate or persuade them.
 - 648 ■ Provide materials and services in all relevant
 649 languages⁷ and in culturally appropriate ways
 650 to enable inclusive participation. This requires
 651 understanding the community context, including
 652 the demographics of the community and, when
 653 possible, community assets and resources,
 654 relationships, and institutional or cultural barriers.
 - 655 ■ Ensure that high-quality, fluent translation is
 656 available both for events and written materials
 657 and consider how different groups may receive
 658 the content and communication channels.
 - 659 ■ Make sure outreach materials effectively reach
 660 their communities; for instance, use social media
 661 platforms that will best reach the people in the
 662 community (e.g., some use visual messages and
 663 are favored by young adults, others use short
 664 messages and have a more even age distribution).
 - 665 ■ Consider potential logistical barriers, including
 666 physical and geographical, temporal, caregiving
 667 responsibilities, and transportation-related
 668 barriers. For instance, it is often easier for people
 669 with more time and resources to attend meetings
 670 or otherwise provide input.
 - 671 ■ Don't assume that underserved communities'
 672 lack of engagement means lack of interest.
 673 Instead, evaluate how to make the processes
 674 accessible to and inclusive of all populations.

Social Capital and Resilience⁸

In addition to gathering critical input to resilience efforts, community engagement helps build social capital. Social capital can be defined as the features of social organizations, such as networks, norms, and trust that facilitate action and cooperation for mutual benefit. It includes bonds within community groups, across different populations, and the relationship between those in positions of authority and the broader community. It's the intangible connection and trust between people and among community groups. Social capital research establishes that participation and engagement within and across groups in a community has positive individual and community-wide benefits before, during, and after disasters. Social capital is critical to resilience.



7 For reference or additional guidance see FEMA's limited English proficiency (LEP) policy, FEMA Policy FP-256-23-001 Language Access, https://www.fema.gov/sites/default/files/documents/fema_policy-language-access.pdf. Federal agencies and recipients of federal financial assistance have language access responsibilities pursuant to applicable Federal civil rights laws and authorities. For more information see Department of Justice, LEP.gov, <https://www.lep.gov/>.

8 Aldrich, Daniel, and Michelle Meyer, "Social Capital and Community Resilience." *American Behavioral Scientist*. 2015. 59. 254-269. Accessed February 26, 2024. <https://doi.org/10.1177/0002764214550299>.

691 **Planning for Resilience**

692 Any community or organization can make a plan, from a neighborhood, to a business or nonprofit, to a
 693 government entity. Resilience planning can take a variety of paths, each with its own pros and cons as shown
 694 in the following table. These approaches are not mutually exclusive and may intersect and merge over time.

CREATE A STAND-ALONE PLAN FOCUSED ON RESILIENCE

 **PROS**

- Keeps focus on resilience
- Can create planning team from scratch
- Can be designed free of constraints that other plans may have

 **CONS**

- May strain resources and add to planning fatigue
- Adds another plan to an already crowded field which may create confusion
- May be disconnected from other planning efforts including authoritative plans

ADD RESILIENCE AS A CORE COMPONENT OF AN EXISTING PLAN

 **PROS**

- Can leverage existing planning team, relationships, and processes to jump start planning process
- Can include in plan(s) where there is the most overlap with resilience issues and amplify existing efforts

 **CONS**

- May cause confusion about what resilience is or appear to just be re-branding existing efforts
- Resilience loses prominence in plan
- Must work within other plan structure and requirements which may limit scope and ability to address interdependencies or cross-cutting nature of resilience

INTEGRATE RESILIENCE INTO ALL COMMUNITY PLANS

 **PROS**

- May be able to fully address root causes and interdependencies because of the crosscutting nature of resilience
- Institutionalizes resilience into community decision-making

 **CONS**

- Resilience loses prominence in plan
- Must work within other plan structure or requirements
- Requires significant resources and coordination, which may not fit within the timeframe, scope or authority of the entity leading the planning effort



- 695 Some things to consider when selecting a planning
 696 approach include the following:
- 697 ■ **What is the current understanding** of future
 698 conditions, shocks, and stressors and how has
 699 that been integrated into previous plans?
 - 700 ■ **What resources** are available to devote to
 701 resilience planning?
 - 702 ■ **What other plans** will be developed or updated
 703 and what are the timing of those efforts?
 - 704 ■ **Who has been engaged** in previous planning
 705 processes and how does that compare to who
 706 should be included in resilience planning?

No matter the approach selected, integration of
 resilience with other planning efforts is critical. At a
 minimum, plans should not conflict with one another.
 Ideally, plans should complement or build from one
 another and acknowledge interconnections. For
 example, an economic development plan might
 have to address the need for affordable workforce
 housing and a robust transit system.

Existing plans can give ideas on who to engage in
 planning efforts and provide information about the
 community’s past, present, and future, including
 policies, projects, and programs. Opportunities may
 also exist to align goals and objectives and provide a
 coordinated path forward for the community. Some
 examples of the kinds of plans that may provide
 valuable input include comprehensive or master
 plans, affordable housing plans, flood mitigation plans,
 community energy plans, economic development
 plans, and long-range transportation plans.

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726 APPLYING RESILIENCE TO THE PLANNING PROCESS

727 Resilience plans might be strategic, operational, or tactical in nature depending on where a community or
728 organization is in its resilience journey. No matter the approach or nature of the plan, below are examples of
729 questions that can help bring resilience principles into the planning process.

730 1. Form a Collaborative Planning Team

- 731 Who will be most impacted by the shocks and stressors and how are they represented
- 732 at the table and in the decision-making process?
- 733 How will members be added overtime to bring in other perspectives and information?

734 2. Understand the Situation

- 735 Have both acute shocks and chronic stressors been considered and are the interaction
- 736 between the two understood?
- 737 Have the root causes of impacts been explored?
- 738 What disparities drive long-term vulnerability, especially of underserved populations?

739 3. Determine Goals and Objectives

- 740 Do the goals and objectives significantly improve the ability of the community to be resilient?
- 741 Are the needs of people front and center?

742 4. Develop the Plan

- 743 Do the planning decisions produce any intentional benefits or unintended consequences
- 744 for underserved communities?
- 745 Do the proposed options adequately recognize and address interdependency of systems?
- 746 Do the proposed options emphasize co-benefits and meeting multiple objectives?

747 5. Write, Review and Approve the Plan

- 748 Is the plan accessible to all users including people with disabilities and those that speak
- 749 languages other than English?
- 750 How are the voices of those most impacted by the shocks and stressors represented
- 751 in the approval process?
- 752 Does a feedback loop exist to inform community members about how their input
- 753 was incorporated?

754 6. Implement and Maintain the Plan

- 755 Has the planning team provided all interested parties, especially underserved
- 756 and/or disadvantaged communities with meaningful opportunities for continued
- 757 understanding and involvement?
- 758 How is the plan integrated into broader community planning processes,
- 759 products, and strategies?

760 **Strengthening Resilience through Policy**

761 Policies are a key instrument for enabling action.
 762 They can allocate resources, provide authorities to
 763 take certain actions, or serve as a tool to
 764 communicate the priorities of an organization or
 765 community. While frequently associated with
 766 government, policies can be applied across the
 767 public, private, and non-profit sectors to build
 768 resilience. Policies can take a variety of formats,
 769 including legislation, regulations, resolutions and
 770 proclamations, and administrative/procedural
 771 actions (see Figure 3). This section provides an
 772 overview of the types of resilience policies that
 773 communities and organizations can consider. It also
 774 provides information on decision-making
 775 considerations that inform the development and
 776 implementation of policies.

777 Who is involved in the development of policy is an
 778 important consideration for resilience. Like the plans
 779 previously discussed, policies should be informed by
 780 a diverse range of voices including those responsible
 781 for implementing them. The people directly affected
 782 by the policy and those implementing the policy can
 783 offer a perspective on unforeseen challenges or
 784 outcomes that others may lack.

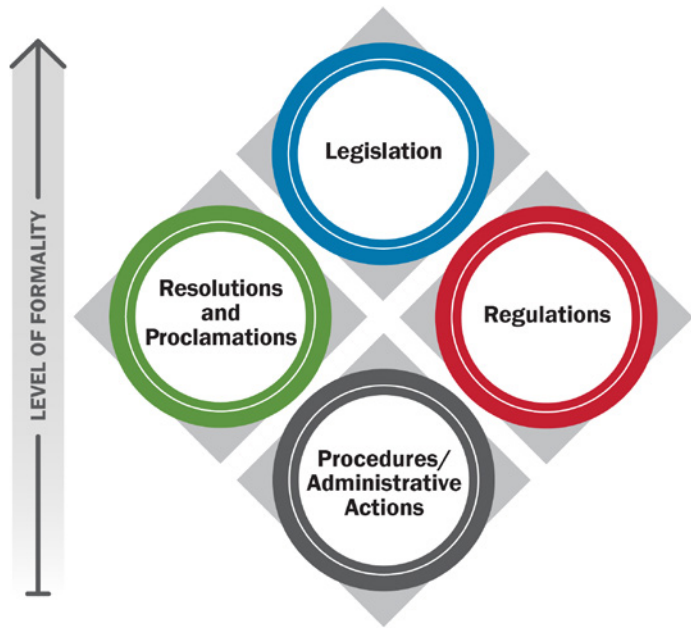


Figure 3. Types of Policies



785 **LEGISLATION**
 786 Legislation can be an essential and foundational
 787 tool to establish authorities, define roles and
 788 responsibilities, and allocate resources for resilience
 789 efforts at all levels of government. While legislation
 790 to become laws requires a greater degree of effort
 791 and consensus than other types of policies, they can
 792 be essential tools to institutionalize resilience. Many
 793 laws that can be used to undertake resilience efforts
 794 already exist such as environmental legislation
 795 including the National Environmental Policy Act,
 796 Bipartisan Infrastructure Investment and Jobs Act,
 797 Community Disaster Resilience Zones Act, and the
 798 Coastal Zone Management Act. While bills can take
 799 multiple forms, the following table presents three
 800 types of bills that have been used across the nation
 801 to build or strengthen resilience.

802 **Example Resilience Legislation Outcomes**

803 **Authorities, Roles, Responsibilities,**
 804 **and Organizational Structures**

- 805 ■ Permanently establishing a CRO
806 or office of resilience.
- 807 ■ Creating resilience-focused positions or
808 establishing resilience responsibilities within
809 existing departments and agencies.
- 810 ■ Delegating authority to departments and agencies
811 to regulate (e.g., land use, building codes, natural
812 resource protections).
- 813 ■ Mandating the sharing or disclosure.

814 **Creating or Modifying Programs**

- 815 ■ Creating resilience programs, including establishing
816 eligible applicants and activities, to deliver financial
817 resources or technical assistance.
- 818 ■ Modifying existing programs to incorporate resilience
819 considerations into financial or technical assistance.

820 **Appropriations**

- 821 ■ Appropriating funding for the operations of
822 resilience offices or for positions within existing
823 departments and agencies.
- 824 ■ Appropriating funding for resilience
825 projects or programs.

826 **RESOLUTIONS AND PROCLAMATIONS**

827 Resolutions and proclamations are tools that
 828 senior-appointed and elected officials or other
 829 governing bodies (e.g., boards of directors) can
 830 use to communicate leadership intent, highlight
 831 a critical resilience issue or recognize an event or
 832 key milestone. They can come through legislative
 833 or executive action. While not binding, resolutions
 834 and proclamations can be effective tools for
 835 establishing priorities, securing buy-in, and spurring
 836 action. Examples of resilience-focused resolutions or
 837 proclamations include the following:

- 838 ■ **Adoption of resilience plans** by chief-elected
839 or appointed officials or governing bodies
840 shows a commitment to implement the goals
841 and strategies identified in the plan. In short,
842 adoption communicates that a plan is not simply
843 a document, but rather a blueprint to take action.
- 844 ■ **Awareness days/months** provide an opportunity
845 to communicate about priority issues, educate
846 the public, and raise awareness about actions
847 that can be taken to strengthen resilience. For
848 example, observing hazard-awareness months are
849 common practices that educate the public about
850 specific risks and provide tangible information
851 about how to lessen that risk.
- 852 ■ **Remembrances or celebrations** can bring the
853 community together around a shared experience,
854 such as a past disaster, as well as to celebrate key
855 milestones or accomplishments. In both cases,
856 they can help to build connection, cohesion, and
857 momentum behind resilience efforts.



858 **REGULATIONS, TOOLS, STANDARDS,**
 859 **AND GUIDELINES**
 860 Agencies and organizations can apply regulations,
 861 tools, standards, and guidelines to address specific
 862 resilience priorities, including shocks and stressors.
 863 Community or organizational planning processes,
 864 including comprehensive plans, hazard mitigation
 865 plans, and capital improvement plans, are important
 866 forums to evaluate what regulations, tools, and
 867 standards make the most sense to address
 868 resilience priorities and needs in that community.
 869 While adoption of regulations and standards is the
 870 first step, implementation and enforcement are
 871 crucial for long-term success.



**Example Regulations, Tools, Standards,
 and Guidelines** 872
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Codes and Standards 874

- Codes and standards, such as the International Building Code, American Society of Civil Engineers standards, National Fire Protection Association standards, which regulate building structure design, engineering, construction, occupancy, and compliance to ensure public health, safety, and sustainability.⁹ Codes also help to provide standard requirements across communities for design and construction. 875
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- Hazard-specific codes, which address building requirements related to shocks such as floods, wildfires, high winds, and earthquakes. 884
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- Codes that address sustainability objectives, such as energy efficiency and resource conservation. 887
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- Design or technology standards, including climate-informed approaches, for infrastructure systems, public safety systems and nature-based solutions. 889
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Land Use Regulations, Tools, and Guidelines 892

- Zoning to guide what kinds of development can occur in specific areas of a community to limit risk from specific hazards or limit hazard creep (e.g., a low hazard dam can become a high hazard dam when a community increases development downstream and within the dam breach inundation) and to alleviate stresses such as affordable housing shortages. 893
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- Floodplain management regulations such as freeboard, minimum elevation requirements, buffers, and setbacks. This could include standards that exceed the National Flood Insurance Program minimum requirements. 900
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- Conservation easements, land acquisitions, deed restrictions, and land trusts that restrict or remove development in environmentally sensitive or hazardous areas and improve environmental quality. 905
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- Incorporation of future climate risk into land use and building regulations or guidelines. 909
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- Stormwater management ordinances, including watershed-scale solutions, which reduce runoff, sedimentation, and pollution and promote improved water quality and groundwater recharge. 911
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9 International Code Council, “The International Codes.” Undated. Accessed February 26, 2024.
<https://www.iccsafe.org/products-and-services/i-codes/the-i-codes/>

915 **BUSINESS PROCEDURES AND**
916 **ADMINISTRATIVE ACTIONS**

917 Business procedures and administrative actions
918 provide a range of opportunities to incorporate
919 and address resilience in the day-to-day business
920 of governments and organizations. Because
921 governments and organizations generally have
922 delegated authorities to oversee, modify, and
923 implement these procedures and actions, they can
924 be some of the most feasible, flexible, and adaptable
925 tools to address resilience priorities. In some cases,
926 administrative actions can be used to initiate new
927 resilience programming and can be paired with
928 legislation to institutionalize those efforts.

929 **POLICY DECISION-MAKING CONSIDERATIONS**

930 Identifying and determining the right policies to
931 strengthen resilience requires evaluation of the
932 community or organization’s situational context,
933 including priority shocks and stressors. In addition,
934 within any given organization or level of government,
935 the context for determining what policies are most
936 appropriate will likely be influenced by the broader
937 policy landscape. For example, federal or state
938 legislation may influence how policies are crafted
939 and implemented at other levels of government, as
940 well as for private sector and non-governmental
941 organizations. Therefore, it is important to
942 understand the broader resilience policy landscape,
943 including how other policies may empower or inhibit
944 specific pathways, when identifying and pursuing
945 specific solutions. Foundational questions that may
946 help evaluate what type of policy makes the most
947 sense include the following:

- 948 ■ **Why** is the policy needed?
- 949 ■ **What** outcome is intended?
- 950 ■ **What** kind of policy is most appropriate?
- 951 ■ **What** are the primary benefits and the co-benefits
952 (e.g., losses avoided, social/environmental/
953 economic benefits)?
- 954 ■ **What** are the unintended consequences
955 or drawbacks?
- 956 ■ **How** does the policy interact with other policies?
- 957 ■ **Whose** input has and will inform the policy?

**Example Resilience Business Procedures
and Administrative Actions**

Executive Actions

- Establishing cross-cutting resilience policies across all departments within a government or organization. 961 962 963
- Creating new resilience leadership positions, organizational structures, or responsibilities. 964 965

Organizational Policies and Processes

- Incorporating resilience criteria into budgeting processes, including capital improvement planning, project identification, scoping, and investment prioritization processes. 967 968 969 970
- Completing risk assessments, including consideration of future conditions, for funded infrastructure and other capital projects. 971 972 973
- Procuring pre-disaster contracts or development of mutual aid agreements that enable quick mobilization of resources after a disaster event (e.g., debris removal). 974 975 976 977
- Enhancing and streamlining procurement processes to increase opportunities for local businesses and underserved communities to participate. 978 979 980
- Mapping supply chains to understand potential upstream and downstream vulnerabilities. 981 982
- Ensuring employees are engaged with and understand the resilience plan. 983 984

Permitting

- Enforcing resilience-related codes, standards, regulations, and other tools to ensure policy translates into action. 985 986 987 988
- Implementing measures to make permitting and inspection processes as transparent, accessible, and efficient as possible 989 990 991

Performance Planning

- Incorporating resilience priorities, including measurable goals and objectives, into individual and organizational performance plans. 992 993 994 995

996 **Selecting Resilience Projects and Programs**

997 Projects and programs are the activities that
 998 communities engage in to improve their resilience.
 999 Planning and policies set up the conditions and
 1000 guidelines for resilience, while projects and programs
 1001 are often where it becomes a reality. The seven
 1002 resilience principles should be considered during the
 1003 development, selection, design, and implementation
 1004 of projects and programs.

1005 Resilience efforts require a shift from looking not only
 1006 at historical and current conditions, which provides a
 1007 degree of certainty, to also considering future
 1008 conditions and a range of uncertain shocks and
 1009 stressors. That uncertainty requires projects and
 1010 programs to be designed to be able to reduce risk
 1011 under a range of scenarios and be adaptive as
 1012 conditions change. A broad base of support for
 1013 resilience projects and programs will ensure
 1014 resources remain invested even as the normal cycle
 1015 of leadership change within organizations happens.



TYPES OF PROJECTS AND PROGRAMS

Projects or programs can be implemented by a single organization or addressed through partnerships across organizations, including public-private partnerships. Resilience projects and programs can take many forms and may lead to incremental changes or to transformative changes. Resilience efforts also may be designed to be accomplished at once or to be added onto or adapted over time. Resilience projects and programs are all characterized by their ability to provide co-benefits or meet multiple objectives. Examples include the following:

- A county in Appalachia has experienced severe ice storms and tornadoes several times over the past few years. The county is interested in protecting electric utility lines that serve the county seat where the county’s emergency operations center, main hospital and high school are located. A coal mine in the county also recently closed. A hazard mitigation project might be the construction of new power lines and poles to create alternatives to power distribution in the event of extreme weather. A resilience project, on the other hand, would include multiple objectives. It may also build a microgrid based on a renewable power source like solar with energy storage, which would reduce emissions, and pair it with an apprenticeship program that retrains coal miners, giving them marketable skills for future jobs.
- Many residents of a small city in the desert southwest have experienced food insecurity since the COVID-19 pandemic due to high unemployment. The city is also concerned about the lack of jobs for younger residents, which may result in them moving out of the city. A social service project might be to open a food pantry, while a resilience project might address food security through by pairing the food pantry with incubating a drought-resistant aquaponics small business that also gives career pathways to youth.

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1056 Below are two examples of resilience projects and programs:

- 1057 ■ Nature-based solutions are actions to protect, 1075
- 1058 sustainably manage, or restore natural or modified 1076
- 1059 ecosystems to address societal challenges, 1077
- 1060 simultaneously providing benefits for people 1078
- 1061 and the environment.¹⁰ These solutions include 1079
- 1062 sustainable planning, design, environmental 1080
- 1063 management, and engineering practices that 1081
- 1064 integrate natural features or processes, including 1082
- 1065 into the built environment, to reduce risk and 1083
- 1066 promote adaptation and resilience. They often 1084
- 1067 come at a lower cost than traditional infrastructure 1085
- 1068 and offer significant monetary and non-monetary 1086
- 1069 benefits. Co-benefits include economic growth,
- 1070 green jobs, increased property values, and
- 1071 better public health. Nature-based solutions also
- 1072 have potential to foster additional co-benefits
- 1073 such as improved population mental health and
- 1074 opportunities for social connectedness.

- A resilience hub is a building that serves as a
- space to provide social services and a space for
- social connection and resilience education year-
- round, like a community center or recreation facility.
- These buildings are augmented to allow them to
- provide additional services in the event of a
- disaster. For example, they are designed with
- onsite back-up power that could be in the form of
- renewable power and energy storage systems
- capable of sustaining power in the event of grid
- failure, which has the co-benefit of reducing facility
- energy costs and greenhouse emissions.



10 White House Council on Environmental Quality, White House Office of Science and Technology Policy, White House Domestic Climate Policy Office, *Opportunities to Accelerate Nature-based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, & Prosperity*. November 2022. Accessed February 26, 2024. <https://www.whitehouse.gov/wp-content/uploads/2022/11/Nature-Based-Solutions-Roadmap.pdf>.



1087 **HOW TO IDENTIFY AND PRIORITIZE PROJECTS AND PROGRAMS**

1088 Resilience projects and programs should be
 1089 grounded in a community’s needs, which can be
 1090 identified through planning. They can be built on
 1091 existing efforts or be a new effort. They will also
 1092 be dependent on what resources are available,
 1093 from what sources, and for what purpose; the
 1094 [Financing Resilience Efforts](#) section goes into
 1095 more detail on how to pay for resilience projects
 1096 and programs.

1097 Communities should establish qualitative and
 1098 quantitative criteria for determining what projects and
 1099 programs should be undertaken and how to prioritize
 1100 the selected projects based on the community’s
 1101 resilience goals. The criteria may be different for
 1102 project selection (e.g., which projects are preferred)
 1103 versus project prioritization (which projects to do first),
 1104 or the criteria may be the same. The criteria should
 1105 reflect the values of the community and consider the
 1106 seven resilience principles.

Whatever criteria are selected, it is important to
 create a common scoring guide that defines what
 the criteria mean and how they will be evaluated.
 Whether a quantitative system is used or a
 qualitative system such as high, medium, and low,
 the criteria and the process used to apply them
 should be clear and transparent to all people
 involved. The common scoring guide can be used
 in various community processes, such as resilience
 plans, annual budgets, or capital improvement plans.
 The decisions on what projects and programs are
 selected should be made through a diverse and
 inclusive process that incorporates the preferences
 of community members.

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1121 **Financing Resilience Efforts**

1122 Many resilience efforts require funding. In some
 1123 cases, this can be addressed by incorporating
 1124 resilience priorities into existing planning processes,
 1125 projects, and programs that already have funding.
 1126 In other cases, they will require added resources.
 1127 The interdependent and multi-objective nature
 1128 of resilience means that in some cases, multiple
 1129 streams of funding may be available and needed
 1130 to finance the project. Therefore, bringing together
 1131 multiple funding sources as a portfolio is beneficial.
 1132 Oftentimes, the sources or mechanisms for funding
 1133 resilience are not new, but how they are being
 1134 used or combined for a specific activity may be.
 1135 Understanding the options available and how they
 1136 can be used is critical, as is identifying what funding
 1137 can be used early in the process to help unlock
 1138 future funding opportunities. Accessing multiple
 1139 funding sources may also result in opportunities to
 1140 coordinate with multiple partners, strengthening
 1141 both partnerships and resilience projects. This
 1142 section provides examples of the types of funding
 1143 sources and approaches that can be used to support
 1144 resilience efforts.



SOURCES

1145 A variety of funding sources can be used to support
 1146 resilience efforts, such as grants, loans or loan
 1147 guarantees, bonds, and in-kind services. In many
 1148 cases, multiple funding sources can and will need
 1149 to be used together to achieve multiple objectives.
 1150 Careful consideration and clear understanding of
 1151 eligibility criteria for applicants and activities, match
 1152 requirements, regulatory reviews, and duplication
 1153 of benefit policies are important to maximize the
 1154 use of these resources. Understanding who has
 1155 access to capital and how to ensure equitable
 1156 access to financial resources is an equally
 1157 important consideration. 1158

1159 Individuals, households, and families,
 1160 nongovernmental and philanthropic organizations,
 1161 and businesses can all financially contribute to their
 1162 own resilience needs, as well as support broader
 1163 community-wide resilience efforts.

1164 Public-private partnerships that address resilience
 1165 priorities can take a variety of forms, but they
 1166 generally consist of agreements between
 1167 government, private sector, and in some cases,
 1168 philanthropic organizations where they share
 1169 financial risk and beneficial outcomes of projects,
 1170 where the public sector leverages the expertise and
 1171 resources of the private sector, and where the public
 1172 sector retains oversight or control of the project.
 1173 Specific models can include the following:

- 1174 ■ **Guarantees and co-financing structures** where 1174
 1175 the private sector obtains financing from lenders 1175
 1176 or investors, receives financing or loan guarantees 1176
 1177 from the public sector, and collects revenue once 1177
 1178 the project is complete. 1178
- 1179 ■ **Incentive or Pay-for-Success models** where 1179
 1180 private investors provide up-front capital for 1180
 1181 the execution of an evidence-based project or 1181
 1182 program, a service provider provides the service, 1182
 1183 and if independent evaluators find that the 1183
 1184 project met or exceeded agreed-upon outcomes, 1184
 1185 the public sector repays the investors. Project 1185
 1186 and program types can span a wide variety 1186
 1187 of activities including health services, social 1187
 1188 services, and nature-based infrastructure. 1188

1189	FUNDING MECHANISMS		1236
1190	A broad range of funding mechanisms can be used,	a tax overlay district is an example of a special	1237
1191	depending on the nature of the activity:	assessment. These tools are frequently applied	1238
1192	■ Annual and capital budgets provide an	for the use of public infrastructure or facilities	1239
1193	opportunity for public, private, and non-	such as roads and airports, as well as for natural	1240
1194	governmental organizations to build resilience	amenities such as parks and open space.	
1195	priorities into annual programs and priorities.	■ Tax credits are the funding that individuals and	1241
1196	Budgeting processes can also be used to	businesses can subtract from owed taxes and	1242
1197	drive collaboration and coordination across	are usually applied to support the execution of	1243
1198	departments. Resilience decision-making criteria	specific economic, environmental, or capital	1244
1199	can also help evaluate budgets, refine priorities,	projects (e.g., affordable housing, energy efficient	1245
1200	and drive procurement decisions.	home upgrades). Tax credits can be used to help	1246
1201	■ Grants from federal agencies, state, local,	finance capital projects and repay debt over time.	1247
1202	tribal, and territorial governments, philanthropic	■ Tax checkoff programs can help facilitate	1248
1203	organizations, and the private sector can address	voluntary contributions from taxpayers to specific	1249
1204	a range of resilience priorities. While individual	priorities (e.g., environmental conservation,	1250
1205	grant programs frequently focus on specific	research, support for socially vulnerable	1251
1206	activities, organizations can, as feasible, bring	populations). They are most frequently used	1252
1207	together multiple funding sources to fund multi-	at the state level.	1253
1208	objective resilience projects.	■ Insurance provides individuals, families,	1254
1209	■ Debt instruments can enable governments,	and households; businesses; non-profits; and	1255
1210	businesses, other organizations, and in some	governments with access to funding when an	1256
1211	cases individuals, families, and households, to	adverse event such as a disaster occurs and	1257
1212	secure funding up-front for high priority resilience	causes damage to buildings, infrastructure,	1258
1213	projects, while paying the funding back over	and other possessions, or disrupts regular	1259
1214	time. The use of debt instruments for resilience	activities (e.g., interruption of business activities).	1260
1215	priorities can depend on a variety of factors,	Some types of insurance cover multiple hazards	1261
1216	including borrowing authorities, borrowing costs,	(e.g., homeowners insurance) whereas others	1262
1217	and credit ratings. Examples of debt instruments	cover an individual peril not covered elsewhere	1263
1218	include direct loans, loan guarantees, and bonds	(e.g., flood insurance or earthquake insurance).	1264
1219	including green bonds, catastrophe bonds, and	Insurance products can also be designed	1265
1220	resilience bonds.	to encourage practices that increase future	1266
1221	■ Infrastructure authorities, infrastructure banks,	resilience. For example, the U.S. Department of	1267
1222	and green banks are government operated	Agriculture has provided crop insurance premium	1268
1223	financing institutions that provide capital,	reductions to farmers who adopt practices that	1269
1224	including loans, loan guarantees, and equity	reduce soil erosion and improve soil health,	1270
1225	investments, for sector-specific projects (e.g.,	changes that increase crop resilience.	1271
1226	transportation, energy). Infrastructure banks can	■ Value capture approaches, including tax-	1272
1227	be used to help further leverage private financing	increment financing, help capitalize on the	1273
1228	for capital projects.	value created by infrastructure investments,	1274
1229	■ User fees and special assessments can be	such as increases in property values and	1275
1230	used to invest in resilience priorities, as well as	economic activity.	1276
1231	to facilitate public-private partnerships. User fees,	■ Impact investment funds that target projects	1277
1232	like tolls or utility fees, are charged to directly	and programs that have a measurable social or	1278
1233	cover the cost of a provided service. Special	environmental co-benefit in addition to a financial	1279
1234	assessments are taxes on property owners within	return. This type of investment may result	1280
1235	a specific area or district for a specific service;	from venture capital, institutional investments,	1281
		or philanthropies.	1282



1283 **Measuring and Evaluating Resilience**

1284 Measurement and evaluation of resilience requires an
 1285 understanding of where a community or organization
 1286 is, what its resilience goals are and what success
 1287 looks like. This information gives communities and
 1288 organizations the information needed to identify
 1289 priorities and challenges, as well as to chart progress
 1290 towards goals and evaluate actions.

1291 While no direct measure of resilience exists, many
 1292 indicators can be measured that have a strong
 1293 link to resilience. Measurement of resilience is
 1294 best done using both qualitative and quantitative
 1295 indicators. Selecting what indicators to use will
 1296 depend on the needs, goals, and outcomes that a
 1297 community defines. Indicators use both qualitative
 1298 and quantitative data to characterize an element of
 1299 a system. Qualitative measures or data that connect
 1300 to experiences of communities and stakeholders
 1301 involved can give a better understanding of the how
 1302 and why of resilience efforts, while quantitative
 1303 measures or provide objective measurement of the
 1304 what of resilience. For instance, housing affordability
 1305 would be an indicator defined by quantitative
 1306 measures like the percent of households that are
 1307 rent-burdened and/or qualitative measures like
 1308 interviews with residents on their experience finding
 1309 safe, sanitary housing given their income.

Measures generally fall into one of four categories: 1310

- 1311 ■ **Input** measures focus on the number of 1311
 1312 resources being put into the effort, such 1312
 1313 as funding, labor hours, and number of 1313
 1314 partners involved. 1314
- 1315 ■ **Process** measures focus on the activities being 1315
 1316 performed, such as how long a step takes to 1316
 1317 complete, whether the effort is on schedule, 1317
 1318 and how much rework is needed. 1318
- 1319 ■ **Output** measures focus on the products 1319
 1320 or services produced by the effort, such as 1320
 1321 the number of people helped, the number 1321
 1322 of commodities delivered, and the acres of 1322
 1323 land protected. 1323
- 1324 ■ **Outcome** measures focus on the impact from 1324
 1325 the effort, such as decreased homelessness, 1325
 1326 increased food availability, improved mental 1326
 1327 health, decreased flood risk, and an increased 1327
 1328 ability for resilient systems that are better able to 1328
 1329 withstand and maintain service despite shocks. 1329

Measurement of resilience can also be an 1330
 1331 opportunity to publicize accomplishments and 1331
 1332 progress made in building resilience, which is 1332
 1333 important to sustain long-term interest and 1333
 1334 investment in resilience activities. 1334

1335

CONCLUSION

1336 Strengthening resilience requires collective effort
1337 from organizations across all sectors and disciplines,
1338 across all levels of governments, the private sector,
1339 non-profit organizations, and academia, as well as
1340 communities, families, and individuals.

1341 To successfully build resilience, everyone must
1342 understand the role they play and the nation
1343 must come together to work towards our [Vision](#)
1344 of the following:

- 1345 ■ **A resilient people**
- 1346 ■ **A resilient society**
- 1347 ■ **A resilient economy**
- 1348 ■ **A resilient built environment** and
- 1349 ■ **A resilient natural environment**

1350 Resilience looks different for different communities,
1351 as do the actions needed to strengthen resilience.
1352 Factors such as history, culture, geography,
1353 demographics, and religion influence a community's
1354 resilience goals, priorities, and actions, as do the
1355 community's risks and where the community is
1356 in its resilience journey. As the maturity model
1357 in Appendix A shows, some communities may
1358 just be starting to address resilience, tackling it
1359 primarily from an ad hoc perspective, while others
1360 may have resilience integrated into all that they
1361 do. Communities may also find that they have
1362 some characteristics in one tier (e.g., an "emerging"
1363 understanding of shocks and stressors) and
1364 some characteristics in another tier (e.g., such as
1365 "enhanced" resilience leadership). Either way, this

resilience maturity model provides insights into the
actions that communities can take to strengthen
their resilience. For communities just starting their
resilience journey, the first step may be gaining a
strong understanding of the shocks and stressors
in the community and setting resilience goals and
priorities. For those that have started their resilience
journey, the next step might be to implement
projects and programs that tackle their identified
shocks and stressors. Some communities are
beginning to see the results of years of investment in
resilience policies, plans, projects and programs and
can evaluate the results, celebrate successes, and
integrate lessons into future efforts.

Regardless of where a community is in its
resilience journey, or the factors that influence the
community's resilience goals, priorities, and actions,
concentrating on the seven principles—all threats
and hazards, people-centered, equitable, adaptive,
collaborative, sustainable, and interdependent—and
effectively applying and integrating the four elements
of people, planning, policies, and projects and
programs, will enable the community to identify and
implement effective solutions and strengthen the
community's resilience.

Additional resources related to strengthening
resilience, including case studies, toolkits, and
guidance documents that dive deeper into some
of the concepts from this guide, are available at
<insert URL when available>.

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APPENDIX A: RESILIENCE MATURITY MODEL



AD HOC	EMERGING	ENHANCED	INTEGRATED
<ul style="list-style-type: none"> ■ Resilience leadership is informal and limited. ■ Resilience efforts are informal, sporadic, and/or lack structure. ■ People, planning, polices, and projects/ programs are often disconnected. ■ Decision-making is reactive, centralized, and largely informed by the availability of outside funding. ■ Collaboration is minimal. Efforts are primarily top-down. There is limited engagement of community members and impacted stakeholders; involvement of underserved voices may be lacking. ■ There is limited understanding and consideration of the relationship between shocks and stressors; both are addressed ad hoc and independently. ■ Goals and priorities are general, short-term, or unclear. ■ Efforts focus primarily on short-term, single purpose solutions and immediate needs without a clear alignment to long-term goals or sustainability. ■ Solutions do not account for the interdependence of systems. ■ No efforts to measure resilience exist. 	<ul style="list-style-type: none"> ■ Resilience leadership is informal and limited. ■ Efforts are more formalized, structured, and address a broader range of objectives, but still often reactive to immediate needs. ■ People, planning, polices, and projects/ programs are often disconnected. ■ Decision-making is proactive and involves a broader range of participants. ■ Collaboration is limited. There is greater engagement of stakeholders and community members, but inclusion of underserved voices is still limited. ■ The connection between shocks and stressors is starting to be understood and addressed. ■ Long-term goals and priorities are established and clear, but only sporadically used to inform or drive efforts. ■ Efforts focus primarily on short-term, single purpose solutions. Future conditions and sustainability are considered in a limited manner. ■ Systems thinking is used in a limited manner. ■ Performance measurement is limited, and input or process based. 	<ul style="list-style-type: none"> ■ Resilience leadership is formalized. ■ Efforts are proactive, forward thinking, and centered on the well-being of people. ■ People, planning, polices, and projects/ programs are well integrated. ■ Decision-making is inclusive and data-driven, considering historical and forecasted data. ■ Collaboration among stakeholders is seamless, leading to cohesive and integrated efforts. Community engagement is prioritized, with meaningful participation from all segments of society, particularly those that are historically underserved. ■ Shocks and stressors are well understood and collectively addressed. ■ Clear, coordinated long-term goals and priorities drive policy, plans, projects and programs. ■ Multi-objective policies, plans, projects, and projects/programs are standard and consider resilience principles. ■ Systems thinking is applied to identify and implement solutions. ■ Performance measurement is robust, and outcome based. 	<ul style="list-style-type: none"> ■ A formal leadership structure coordinates and directs resilience efforts. ■ Efforts are proactive, forward thinking, agile, adaptive, and centered on the well-being of people. ■ People, planning, polices, and projects/ programs are fully integrated and driven by resilience goals. ■ Decision-making is highly inclusive and data-driven, considering historical and forecasted data. ■ Strong Collaboration among diverse sectors fosters collective action, shared investment, and comprehensive resilience-building. Community members are empowered, including those that are historically underserved. ■ Shocks and stressors are well understood and collectively addressed. ■ Clear, coordinated long-term goals and priorities drive policy, plans, projects and programs. ■ Resilience goals and principles drive multi-objective efforts and are fully integrated into budgeting and capital planning processes. ■ Systems thinking is applied to identify and implement solutions, including innovative and transformative solutions and financing models. ■ Performance measurement is robust, and outcome based.

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KEY TERMS

<p>1398 Cascading disaster (or incident): A primary event 1399 (trigger), such as heavy rainfall, seismic activity, 1400 rapid snowmelt or cyberattack, followed by a chain 1401 of other events that may range from modest (lesser 1402 than the original event) to significant intensity or 1403 magnitude; the combined impacts over time (damage, 1404 losses, disruption) are more severe than if they had 1405 occurred separately.¹¹</p> <p>1406 Co-benefits: A positive effect that a policy or 1407 measure aimed at one objective has on another 1408 objective, thereby increasing the total benefit to 1409 society or the environment.¹²</p> <p>1410 Compounding disaster: A combination of 1411 events that occur at the same time and lead to 1412 impacts that exceed the sum of the individual 1413 contributing events.¹³</p> <p>1414 Continuity: The ability to provide uninterrupted 1415 services and support while maintaining 1416 organizational viability before, during and 1417 after an event that disrupts normal operations.¹⁴</p> <p>1418 Continuity of government: A coordinated effort 1419 within the executive, legislative, or judicial branches 1420 to ensure that essential functions continue to be 1421 performed before, during, and after an emergency 1422 or threat. Continuity of government is intended to 1423 preserve the statutory and constitutional authority 1424 of elected officials at all levels of government across 1425 the United States.¹⁵</p>	<p>Critical infrastructure: Systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.¹⁶</p> <p>Equity: the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.¹⁷</p>	<p>1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443</p>
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11 Modified from National Academies of Sciences, Engineering, and Medicine, *Resilience for Compounding and Cascading Events*. 2022. The National Academies Press. Accessed February 26, 2024. <https://doi.org/10.17226/26659>.

12 Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2022 – Impacts, Adaptation and Vulnerability*. June 2023. Accessed February 26, 2024. <https://doi.org/10.1017/9781009325844>.

13 National Academies of Sciences, Engineering, and Medicine, *Resilience for Compounding and Cascading Events*. 2022. The National Academies Press. Accessed February 26, 2024. <https://doi.org/10.17226/26659>.

14 FEMA, *Continuity Guidance Circular*. February 2018. Accessed February 26, 2024. <https://www.fema.gov/sites/default/files/2020-10/continuity-guidance-circular-2018.pdf>.

15 Ibid.

16 U.S. Executive Office of the President, “EO 13636: Improving Critical Infrastructure Cybersecurity.” *Federal Register*. February 12, 2013. Accessed February 26, 2024. <https://www.federalregister.gov/documents/2013/02/19/2013-03915/improving-critical-infrastructure-cybersecurity>.

17 U.S. Executive Office of the President, “EO 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.” *Federal Register*. January 20, 2021. Accessed February 26, 2024. <https://www.federalregister.gov/documents/2021/01/25/2021-01753/advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government>.

1444	Environmental Justice: the just treatment and	1474
1445	meaningful involvement of all people, regardless of	1475
1446	income, race, color, national origin, Tribal affiliation,	1476
1447	or disability, in agency decision-making and other	1477
1448	Federal activities that affect human health and the	
1449	environment so that people 1) are fully protected	1478
1450	from disproportionate and adverse human health	1479
1451	and environmental effects (including risks) and	1480
1452	hazards, including those related to climate change,	1481
1453	the cumulative impacts of environmental and other	1482
1454	burdens, and the legacy of racism or other structural	
1455	or systemic barriers; and 2) have equitable access	1483
1456	to a healthy, sustainable, and resilient environment	1484
1457	in which to live, play, work, learn, grow, worship, and	1485
1458	engage in cultural and subsistence practices. ¹⁸	1486
1459	Hazard: A source or cause of harm or difficulty. ¹⁹	1487
1460	(Hazard) mitigation: A sustained action to reduce or	1488
1461	eliminate risk to people and property from hazards	1489
1462	and their effects. ²⁰	1490
1463	Preparedness: Actions that involve a combination	1491
1464	of planning, resources, training, exercising, and	1492
1465	organizing to build, sustain, and improve operational	1493
1466	capabilities. Preparedness is the process of	1494
1467	identifying the personnel, training, and equipment	1495
1468	needed for a wide range of potential incidents and	1496
1469	developing jurisdiction-specific plans for delivering	1497
1470	capabilities when needed for an incident. ²¹	1498
1471	Prevention: The capabilities necessary to prevent,	1499
1472	avoid or stop an imminent threatened or actual	1500
1473	act of terrorism. ²²	

18 U.S. Executive Office of the President, “EO 14096: Revitalizing Our Nation’s Commitment to Environmental Justice for All.” *Federal Register*. April 21, 2023. Accessed February 26, 2024. <https://www.federalregister.gov/documents/2023/04/26/2023-08955/revitalizing-our-nations-commitment-to-environmental-justice-for-all>.

19 DHS, *DHS Lexicon Terms and Definitions*. Revision 2. October 16, 2017. Accessed February 26, 2024. https://www.dhs.gov/sites/default/files/publications/18_0116_MGMT_DHS-Lexicon.pdf.

20 FEMA, *Developing and Maintaining Emergency Operations Plans Comprehensive Preparedness Guide (CPG) 101* (Version 3.0). September 2021. Accessed August 27, 2023. https://www.fema.gov/sites/default/files/documents/fema_cpg-101-v3-developing-maintaining-eops.pdf.

21 FFEMA, *FEMA Incident Management and Support Keystone*. January 2011. Accessed February 26, 2024. https://www.fema.gov/sites/default/files/2020-07/fema_incident_management_and_support_keystone-Jan2011.pdf.

22 FEMA, *Developing and Maintaining Emergency Operations Plans Comprehensive Preparedness Guide (CPG) 101* (Version 3.0). September 2021. Accessed August 27, 2023. https://www.fema.gov/sites/default/files/documents/fema_cpg-101-v3-developing-maintaining-eops.pdf.

23 Ibid.

24 Ibid.

25 Add National Resilience Plan citation when available.

26 FEMA, *Developing and Maintaining Emergency Operations Plans Comprehensive Preparedness Guide (CPG) 101* (Version 3.0). September 2021. Accessed August 27, 2023. https://www.fema.gov/sites/default/files/documents/fema_cpg-101-v3-developing-maintaining-eops.pdf.

27 DHS, *DHS Lexicon Terms and Definitions*. 2017 Edition, Revision 2. October 16, 2017. Accessed February 26, 2024. https://www.dhs.gov/sites/default/files/publications/18_0116_MGMT_DHS-Lexicon.pdf.

28 Oxford English Dictionary, s.v. “sector, n., sense 1.2.g.ii.” April 2023. Accessed February 26, 2024. <https://doi.org/10.1093/OED/8200098734>.

1501 **Stressors:** Chronic, longer-term conditions that
1502 weaken a community over time and can cause
1503 disruption to community functions and well-being.
1504 Examples include declining industries, deteriorating
1505 infrastructure, endemic crime, diminishing social
1506 capital, extreme temperatures, persistent poverty,
1507 and lack of quality affordable housing.

1508 **System:** A set of things working together as parts
1509 of a mechanism or an interconnecting network.²⁹

1510 **Threat:** Indication of potential harm to life,
1511 information, operations, the environment
1512 and/or property.³⁰

1513 **Vulnerability:** Physical feature or operational
1514 attribute that renders an entity open to exploitation
1515 or susceptible to a given hazard.³¹

1516 **Whole Community:** A focus on enabling the
1517 participation in national preparedness activities of a
1518 wider range of players from the private and nonprofit
1519 sectors, including nongovernmental organizations
1520 and the general public, in conjunction with the
1521 participation of all levels of government in order to
1522 foster better coordination and working relationships.
1523 Used interchangeably with “all-of-Nation.”³²

29 Oxford English Dictionary, s.v. “system, n., sense I.3.a,” July 2023. Accessed February 26, 2024. <https://doi.org/10.1093/OED/1176138304>.

30 DHS, *DHS Lexicon Terms and Definitions*. 2017 Edition, Revision 2. October 16, 2017. Accessed February 26, 2024. https://www.dhs.gov/sites/default/files/publications/18_0116_MGMT_DHS-Lexicon.pdf.

31 Ibid.

32 FEMA, *National Preparedness Goal*. Second edition. 2015. Accessed October 20, 2023. https://www.fema.gov/sites/default/files/2020-06/national_preparedness_goal_2nd_edition.pdf.



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