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Guide Brief 3 –
Existing Community Resilience
Activities Identifying Solutions
to Address Resilience Gaps

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Certain commercial entities, equipment, or materials may be identified in this document in order to describe an experimental procedure or concept adequately. Such identification is not intended to imply recommendation or endorsement by the National Institute of Standards and Technology, nor is it intended to imply that the entities, materials, or equipment are necessarily the best available for the purpose.

Guide Brief 3 – Existing Community Resilience Activities
Identifying Solutions to Address Resilience Gaps

Applicable Section(s) of Guide:	Volume 1, Section 5.2, Identify Potential Solutions to Address Gaps, p. 49

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

Purpose and Scope

Once a community identifies its resilience gaps, the challenge shifts to identifying solutions to close those gaps. One of the most helpful actions is to research and understand what other communities have done to accomplish their goals. This Guide Brief offers descriptions of and links to community resilience programs of leading U.S. communities that follow the process in the Guide or have common goals to those of the Guide or have common goals to those of the Guide. These examples may assist the community resilience planning team in developing practical solutions and implementation plans in Step 4.

Examples of Ongoing Community Resilience Activities

A growing number of communities are developing and implementing resilience programs. Networking with communities that are actively pursuing community resilience provides an excellent learning opportunity. It is particularly useful to understand what solutions have worked well for other communities in closing their resilience gaps, and what solution have not been effective. Volume 1 of the Guide introduces and discusses the 100 Resilient Cities program and examples of programs in Cedar Rapids Iowa, San Francisco California, and the State of Oregon.

The following community resilience programs provide a sample of the ongoing resilience activities that serve as useful for identifying individual projects as well as community-wide programs for improving resilience:

Be Ready Utah. In 2005, the Utah Division of Homeland Security (DHS) launched the *Be Ready Utah* campaign, aimed at encouraging individual personal responsibility in preparedness. It provides a wide variety of resources and sponsors a number of programs, such as a business continuity planning suite for businesses of all sizes. (http://www.utah.gov/beready/business)

Cedar Rapids, Iowa. Following floods in 2008 that impacted neighborhoods and the downtown area, causing billions of dollars in damage, the City of Cedar Rapids developed a framework for reinvesting and revitalizing their community. Within days of the flooding the city set goals to improve flood protection for homes and businesses, restore business vitality, maintain the community's heritage, and to

retain and attract the next generation's workforce. The city's long-term plan included input from the community and focused on: 1) Improving flood protection; 2) Reinvesting in housing, businesses, and neighborhoods; and 3) Rebuilding public facilities.
(http://www.cedar-rapids.org/discover_cedar_rapids/flood_of_2008/flood_recovery_plans.php)

Fort Collins, Colorado. In collaboration with DHS and other partners, Fort Collins is using the Guide to plan for addressing the consequences of future weather and climate related challenges. The planning process considers community impacts and how to mitigate risk to buildings and critical infrastructure.
(https://citiesspeak.org/2016/07/18/how-the-city-of-fort-collins-is-making-community-resiliency-a-reality)

Greensburg & Kiowa Counties, Kansas. Following an EF-5 tornado that severely damaged or destroyed approximately 90 % of the structures in Greensburg on May 4, 2007, Greensburg and Kiowa County developed a long-term community recovery plan. The plan was developed over 12 weeks that included many meetings and discussions with a wide array of community stakeholders representing local government, businesses, civic groups, and residents. Feedback from the stakeholders was used to develop and refine the plan to build back better, and make improvements to the community for the long-term. The plan addresses four main categories: housing; economy and business; community facilities and infrastructure; and sustainable development. The long-term recovery plan is action-oriented, providing a description and recovery value, or prioritization level, for each project.
(http://www.greensburgks.org/residents/recovery-planning/long-term-community-recovery-plan/view)

Joplin Proud. The Joplin Proud committee is comprised of community volunteers who commemorated the 2011 EF-5 tornado that tore through Joplin and Duquesne, Missouri through a disaster recovery summit in May 2016. City leaders from the central United States participated in a two-day summit that focused on the road to recovery and issues related to ensuring safety, responding to families in need, meeting communication challenges, financing recovery, removing debris, keeping residents, managing volunteer efforts, and addressing public health concerns.
(http://www.joplinproud.com/joplin-disaster-recovery-summit/agenda)

Oregon Resilience Task Force Implementation Plan. A task force to facilitate development of an implementation roadmap for the Oregon Resilience Plan was directed by Oregon Senate Bill 33. The Task Force included members of the legislature, fire and rescue, policy advisors, city agencies, private businesses, non-profit organizations, and the scientific community. The report to the 77th Legislature included 21 recommendations that were judged to be the most critical to the state that included oversight, transportation, land use, energy, critical facilities, research, training and education, water, and wastewater. The plan is based on 140 recommendations and was developed in a manner similar to the six steps in the Guide.
(https://www.oregon.gov/OMD/OEM/Pages/Resilience-Taskforce.aspx)

Resilience by Design – Building a Stronger Los Angeles. The development of a resilience plan by Los Angeles, California was triggered, in part, by the annual Great California Shakeout Exercises that were conducted (http://www.shakeout.org/california). The plan focuses on improving the regional economy and minimizing business interruption and long-term population migration. Four policy areas being addressed include retrofitting soft story apartment buildings, non-ductile reinforced concrete buildings, portions of the water infrastructure system, and portions of the telecommunications system. Los Angeles developed programs to address critical gaps identified in the resilience plan.
(http://www.lamayor.org/resilience-design-building-stronger-los-angeles)

Resilient Design Performance Standards for Infrastructure and Dependent Facilities. A partnership of Bounder County, Colorado communities formed the Boulder County Collaborative (collaborative) to spearhead recovery planning and assist with the acquisition of Community Development Block Grant Disaster Recovery (CDBG-DR) funds from the U.S. Department of Housing and Urban Development (HUD). One requirement for receiving the HUD funds was to identify and implement resilience

performance standards that could be applied to each infrastructure project. That requirement led to development of the Resilient Design Performance Standard for Infrastructure and Dependent Facilities. The NIST Guide was used as a tool to identify appropriate time-to-recovery goals. The standard includes a score sheet for rating proposed projects based on their ability to meet the desired performance goals and the additional criteria established in the Colorado Resiliency Framework. The standard integrates resilience indicators with sustainability principals to qualify and prioritize projects. Communities using the Guide may find this process helpful in prioritizing their construction solutions and, after a hazard event, obtaining HUD funding.
(http://www.bccollaborative.org/uploads/6/6/0/6/66068141/resilientdesignperformancestandard_adopted_05.13.2016.pdf)

San Francisco Bay Area Planning and Urban Research Association (SPUR). SPUR is an independent non-profit organization that promotes good planning by local government in the San Francisco Bay Area (http://www.spur.org/). It was responsible for developing a framework related to resilience planning that have directly impacted the local governments actions, including guidance on mitigation policies, retrofitting existing buildings and new construction, and infrastructure systems (http://www.spur.org/featured-project/resilient-city). Their work contributed to initiating an Earthquake Safety Improvement Program for privately-owned buildings in the city, and establishment of a Lifelines Council to bring together key stakeholders from a number of infrastructure systems.
(http://sfgov.org/orr/lifelines-council)

100 Resilient Cities (100RC). The Rockefeller Foundation began working with cities in December of 2013. They selected 100 cities around the world through May 2016 to participate in their program. The cities selected met specified criteria, including innovative mayors, a recent catalyst for change, a history of building partnerships, and an ability to work with a wide range of stakeholders (http://www.100resilientcities.org). The following cities have developed strategies for improving their resilience. These and other 100RC will publish their plans and reports as they are available or updated. Such plans can provide a number of examples for possible administrative and construction solutions.

- *Norfolk's Resilience Strategy.* Norfolk's three resilience goals are: (1) Design the coastal community for the future; (2) Create economic opportunity by advancing efforts to grow existing industries and new sectors; and (3) Advance initiatives to connect communities, deconcentrate poverty and strengthen neighborhoods. Their strategies include updating land use policies and transitioning to a resilient zoning code for new construction. (http://nfkresilientcity.org/wp-content/uploads/2015/10/Norfolk_Resilient_Strategy_October_2015.pdf)

- *OneNYC: The Plan for a Strong and Just City.* New York City's resilience vision has four themes: (1) Our Growing, Thriving City; (2) Our Just and Equitable City; (3) Our Sustainable City; and (4) Our Resilient City. Their initiatives address building affordable housing, integrating government services, information and community data, reducing disaster-related, long-term displacement of residents from homes, and adapting lifelines to withstand severe weather. (http://www.nyc.gov/html/onenyc/downloads/pdf/publications/OneNYC.pdf)

- *Resilient San Francisco, Stronger Today, Stronger Tomorrow.* San Francisco's resilience goals include: (1) Planning and preparing for tomorrow, (2) Retrofitting, mitigating, and adapting, (3) Ensuring housing for San Franciscans today and after a disaster, and (4) empowering neighborhoods through improved connections. The initiatives related to retrofitting dangerous buildings and developing a "Retrofund" are addressing short-term and long-term needs of the community. (http://sfgsa.org/sites/default/files/Document/Resilient%20San%20Francisco.pdf)

- ***Strategic Actions to Shape our Future City - Resilient New Orleans.*** New Orleans resilience vision includes (1) adapting to the changing environment, (2) connecting to opportunity, and (3) transforming the city systems. Their action plans include implementing an urban water plan and redesigning the regional transit systems, and provide examples of far-reaching construction solutions that address multiple daily stressors and disruptive events. (http://resilientnola.org/wp-content/uploads/2015/08/Resilient_New_Orleans_Strategy.pdf)

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