

# NIST COMMUNITY RESILIENCE PLANNING GUIDE **SUCCESS STORY**

## **BOULDER COUNTY COLLABORATIVE, COLORADO**



### **STAKEHOLDER QUOTE**

*"The standard can leverage every capital project as an opportunity to incrementally move Boulder County towards a more resilient future."*

*- Molly O'Donnell  
Boulder County Collaborative  
Planner & Project Manager*

### **HIGHLIGHTS**

- **The NIST Planning Guide served as the framework for defining time-to-recovery goals for critical infrastructure systems and facilities used in the resilient design performance standard.**
- **Organizing the built environment into clusters provided a basis for developing an estimate of how to prioritize systems and facilities for recovery.**
- **City of Longmont will be the first community in Boulder County to apply the resilience standard to routine capital projects.**

### **SITUATION**

Colorado experienced severe flooding in 2013 that affected communities in 24 counties. Following that event, Colorado initiated a statewide effort to improve resilience to natural hazards. A coalition of state agencies came together with over 150 federal and state stakeholders to develop the Colorado Resiliency Framework. The Boulder County Collaborative (BCC), a cooperative group consisting of Boulder County and four cities and three towns within it, formed to direct federal recovery funding from HUD to the most pressing housing and infrastructure needs in the county. HUD's CDBG-DR funding support for infrastructure projects required BCC to develop and implement resilience performance standards for all projects seeking funding. No such performance standards existed to assure that the funds would be used to "build-back-better," requiring such a standard to be developed.

### **PROCESS**

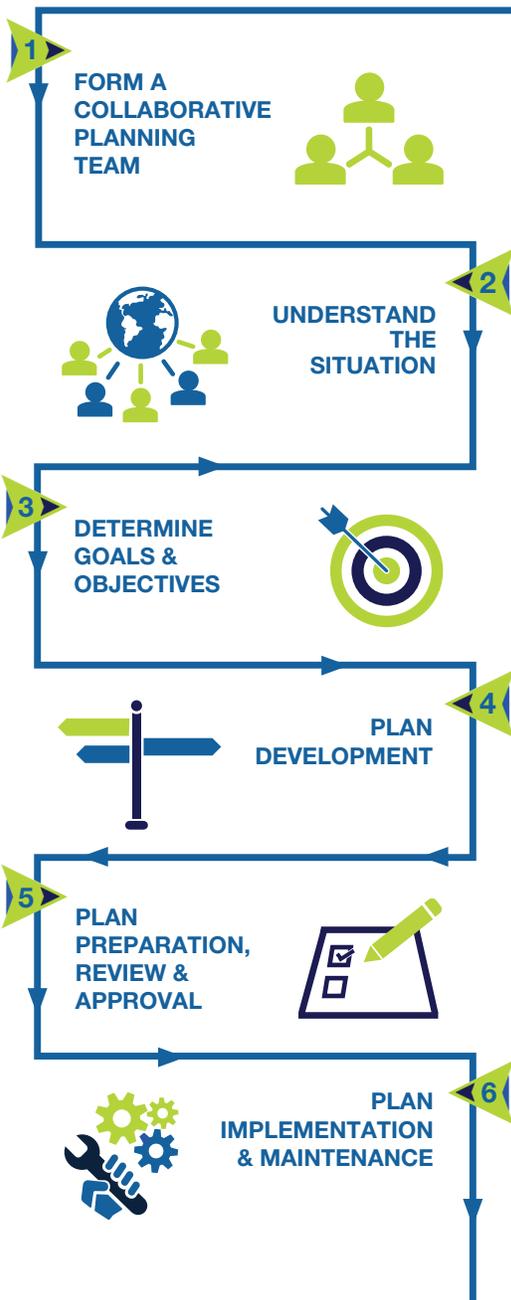
BCC used the Guide along with the Colorado Resiliency Framework as a basis for developing the Resilient Design Performance Standard. The first step was to apply the Guide's steps 1, 2, and 3 to establish countywide performance goals for hazards and all building clusters and supporting infrastructure systems through a series of stakeholder workshops and a separate utility providers' workshop. These were summarized in the Guide performance tables and then reviewed and modified based on input from individual focus groups representing the four major cities, three towns, and the unincorporated area of the county, as well as stakeholders that represented cross-jurisdictional interests. A scoring system based on the state framework and the performance tables was then developed and used along with other metrics to rate, qualify, and prioritize individual reconstruction projects.

### **RESULTS**

Boulder County developed a [Resilience Design Performance Standard](#) in 2016. This Performance Standard allows the communities in the county to define long-term recovery goals to specific hazards. These goals are the basis for incorporating resilience into the design of building and supporting infrastructure systems which will be better poised to withstand future shocks and stresses and recover more quickly. To date, the process, which also includes a comprehensive risk assessment and prefers utilization of green infrastructure, has justified HUD funding for housing and infrastructure projects that total just over \$121 million.

When communities decide to become more resilient, they need an approach that helps them identify and prioritize options consistent with their goals. The National Institute of Standards and Technology (NIST) Community Resilience Planning Guide for Buildings and Physical Infrastructure Systems helps communities do just that, by focusing on the role of the built environment in enabling the community to rapidly recover from disruption. It provides a clear process for communities to better prepare for the future.

## SIX-STEP PLANNING PROCESS



- The NIST Planning Guide provided a framework that could be combined with the Colorado State Resiliency Framework and presented in a manner that could be communicated to stakeholders and grant recipients.
- Using the Guide's return-to-function goals allowed people and communities to choose their own future and use an adaptive approach to complex and rapidly changing demands on infrastructure beginning at the county level and then translated to the needs of local jurisdictions.
- By working with engineers and design professionals, the standard was developed to add an acceptable resilience lens to projects, not require a completely novel process.
- Using time to recovery of function provided in the NIST Guide allows Boulder County to understand its gaps and enables designers flexibility in choosing the best solutions to close those gaps.
- Every capital project can be leveraged to incrementally move Boulder County toward a more resilient future.

## WHAT'S NEXT?

The Collaborative is currently implementing the process to qualify the last set of projects for Round 3 funding. Communities within the county are considering using the resilience performance standard for their other capital projects. The City of Longmont will be the first community to apply the standard along with their sustainability checklist to locally funded capital improvement projects. In addition, performance goals that were set for the county are available for incorporation into the county plans and could provide the basis for integrating resilience planning. Application of the performance goals outside of the funding process is left to the individual jurisdictions. Each may tailor the goals to suit their own situation and needs.

## CONTACT INFO/RESOURCES

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### Boulder County Collaborative <http://www.bccollaborative.org/>

**NIST Community Resilience Program**  
<https://www.nist.gov/topics/community-resilience>

### NIST Contact resilience@nist.gov