

Community Resilience Testbeds Project Area



Science and
Technology

DISASTER IMPACT CHALLENGES

Disasters, both natural and manmade, and their lingering impacts, continue to be a harsh reality for many in the U.S. and around the globe. As the prevalence of these disasters and the scope of related damages increase, so does the detrimental and lasting impacts to affected communities and individuals. The Department of Homeland Security (DHS) faces the crucial challenge of helping prepare for and mitigate the impact to communities, infrastructure, and citizens across the nation. The complexity of such disasters and how to effectively respond is ever increasing and requires not only improved, but innovative technologies (e.g., compound flood models).

COMMUNITY- BASED RESILIENCE

The DHS Science and Technology Directorate (S&T)'s Community Resilience Testbed research and development efforts seek to improve federal, state, local, territorial, and tribal (FSLTT) disaster resilience via comparative analysis through testing and evaluation of various approaches to community and infrastructure resilience.

The Community Resilience Testbed initiative seeks to conduct test and evaluation efforts with ongoing projects that result in actionable implementation of effective community and infrastructure resilience solutions. Working in close collaboration with community stakeholders, S&T can further refine R&D activities and advance the adoption of derived tools and technologies .

PROJECT IMPACT

- This project develops technologies that streamline and optimize FEMA disaster resilience investments in insurance, mitigation, and recovery operations.
- This initiative will improve national, state, and local disaster response capacity by increasing the functionality and accuracy of flood models, identifying new community-sourced innovations, and increasing the efficiencies of preparedness and response activities.

ACCOMPLISHMENTS

- CIVIC 2021 Challenge selectees awarded for Phase 2 (Prototyping).
- FloodAdapt tested and implemented by the City of Charleston.
- CIVIC 2022 Challenge selectees awarded for Phase 1 (Development).



UPCOMING MILESTONES

- CIVIC 2022 Stage Two review and award submissions for:
 - Track A: Living in a changing climate: pre-disaster action around adaptation, resilience, and mitigation.
 - Track B: Resource and Service Equity: Bridging the gap between essential resources and services and community needs (Q1 FY24).
- FloodAdapt user community test and implementation (to be conducted by the State of Maryland) (Q4 FY23).

PERFORMERS/PARTNERS

- National Science Foundation, Alexandria, VA
- Deltares USA, Silver Spring, MD
- City of Charleston, SC
- Maryland Department of Emergency Management, Baltimore, MD
- FEMA, Washington, DC

