

Hardening Critical Facilities and Systems

Initiative Summary Statement:

Improve critical facility and system capabilities in the region through hardening and other strategic mitigation efforts with prioritization given to facilities damaged by Hurricane Ian.

Initiative Description:

Objective: Developing a holistic, regional approach to hardening infrastructure would support readily available critical services for the community, particularly the most vulnerable, immediately following disasters. Effective risk management requires an understanding of criticality, or of the utmost urgency, as well as the associated interconnections of infrastructure. FEMA recommends communities self-define what facilities should be designated as critical, however specific programs and grants may have specific eligibility definitions. Typically, these would include, but not be limited to public safety buildings, wastewater and potable water facilities, power plants, cell towers, etc. From the [Lee County CDBG-DR Action Plan](#), "The infrastructure systems affected by Hurricane Ian's widespread damage included damage to energy systems, roadways, bridges, traffic controls, water and wastewater treatment systems, septic systems, cell towers, and voice and data services." Many of the highest tier critical infrastructure mitigation efforts, like the Sanibel Causeway, were addressed immediately after the storm or have had Hazard Mitigation Grant Program (HMGP) applications submitted to address the need, but many more critical facilities and systems are still in need of funding for hardening. Tropical systems are becoming more severe and more frequent, increasing levels of impacts along with the need to prioritize designing critical infrastructure facilities and systems that can withstand worsening conditions.

Need: Past disasters like Hurricane Irma disrupted emergency functions and operational status of critical facilities and first responder capabilities, but Hurricane Ian's destructive impact exceeded prior community experiences. It was noted in the Hurricane Ian After Action Report that "Mitigation projects throughout the County increased the resiliency of infrastructure and expedited initial restoration activities following Hurricane Ian's storm surge and hurricane-force winds." Stakeholders identified the most serious challenges to facilities and first responders as water pressure issues that led to fire suppression gaps, potable water supply gaps as well as power generation and transmission failure in the immediate aftermath of storms. The problems with roadways and traffic signals hampered response and recovery efforts. Many businesses had a difficult time getting back to work due to internet connectivity issues. Critical infrastructure partners view criticality differently,

based on their unique situations, operating models, and associated risks. Together the region needs to set priorities for its infrastructure, strategize on identifying funding sources, determine if there are infrastructure sectors that should coordinate more regionally and identify if there were capacity issues in the political subdivisions that would benefit from best practices support from neighboring jurisdictions. This also applies to essential services. Utilizing FEMA's Community Lifelines toolkit may provide useful guidance for this effort.

Regional Approach: One of the most significant benefits of having a regional approach to infrastructure is that there is much federal funding to be had if infrastructure and preparedness is viewed through a cross-jurisdictional, system-focused lens. Together, the region has been compiling and prioritizing critical infrastructure projects to submit for HMGP funding. While this grant will not cover all the gaps, the process of putting the applications together has been a collective effort. This can be replicated to apply for other federal funds, especially the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program which has both planning and capital improvement components. The delta of critical infrastructure that needs to be repaired and mitigated requires more resources than are currently being offered with disaster recovery funding from FEMA and HUD.

For years the municipalities have been working with Lee County Public Safety and Florida Gulf Coast University to put together the "Joint Local Mitigation Strategy" and "the Hazard Identification and Mitigation Assessment". From the Joint Local Mitigation Strategy: "In conjunction with prevention, protection, preparedness, response, and recovery efforts, the strategy builds resiliency into the communities that make up Lee County and its political subdivisions." Specific infrastructure sectors, both public and private, can work with Public Safety as they assess response to recent events, and plan and strategize for future hazards, specifically when developing the next version of these documents. While not all infrastructure is considered critical Infrastructure having the community weigh in on priorities, identifying gaps and working together on solutions will better serve the residents and visitors to the County.

Impact: A holistic approach to hardening infrastructure is considered a best practice to maintain continuity of government and bring enhanced support of emergency functions immediately following disasters. By working as a region, sector by sector, there is a better chance to be awarded federal funding as often infrastructure systems are not necessarily isolated within a jurisdiction. Additionally, through this process some jurisdictions may learn best practices or benefit from need capacity support. Strengthening the connection between private infrastructure industry and local Emergency Management may help with

developing continuity plans, assisting with preparedness training and exercises, reduce risk, and help the community recover faster and keeping critical infrastructure robust and functioning. Finally, hardening measures will mitigate against future facility damage and make sure regular facility maintenance is scheduled, all to make sure critical facilities are immediately available for use by first responders and for other critical functions and services post disasters.

Key Considerations:

- Typically, critical infrastructure focuses on 4 main sectors: water, transportation, communication, and energy (Healthcare has its own initiative and its basics should be covered by these 4).
- An all-hazards risk management approach will reinforce and highlight what is critical infrastructure.
- Conduct exercises to assess mitigation measures to identify gaps and capacity.
- Encourage Continuity of Operations Planning (COOP) throughout all sectors and the three levels of infrastructure system and services (critical, essential, and necessary).
- Continue to build trusted and sustainable partnerships throughout sectors in the region and formalize relationships as needed with Memorandums of Understanding (MOUs).

Co-Sponsoring Branches:

Infrastructure, Planning & Capacity, Health & Social Services, Natural Resources, and Economic Recovery

Stakeholders:

- County and municipal departmental experts on:
 - Public safety
 - Utilities
 - Transportation
 - Solid waste
 - Facilities construction and management
 - Public works
 - Innovation and technology
 - Natural resources
 - Risk management
 - Strategic resources and governmental affairs
- Fire Districts
- Police Departments

- School District
- Healthcare systems
- Local port authority
- Utilities and internet providers
- Non-for -profit essential service providers

Potential Funding Sources:

- Federal Emergency Management Agency
- United States Department of Transportation
- United States Department of Health and Human Services
- United States Department of Energy
- United States Department of Housing and Urban Development
- United States Department of Agriculture
- United States Department of the Interior
- United States Environmental Protection Agency
- United States Army Corp of Engineers
- Economic Development Administration
- Small Business Administration
- National Oceanic and Atmospheric Administration
- Federal Transit Administration
- Federal Highway Administration
- Florida Division of Emergency Management

Resources:

- [Joint Local Mitigation Strategy \(leegov.com\)](https://leegov.com/joint-local-mitigation-strategy)
- [2022 Hazard Identification and Risk Assessment.pdf \(leegov.com\)](https://leegov.com/2022-hazard-identification-and-risk-assessment.pdf)
- [Lee County Hurricane Ian AAR.pdf \(leegov.com\)](https://leegov.com/lee-county-hurricane-ian-aar.pdf)
- [Lee County Final CDBG-DR Action Plan 9.19.2023.pdf \(leegov.com\)](https://leegov.com/lee-county-final-cdbg-dr-action-plan-9.19.2023.pdf)