FEMA

Interagency Recovery Coordination

CASE STUDY

Collaborating to Build Resilience

HURRICANE SANDY, 2012

Learning Objective: Examine a regional approach used to improve infrastructure resilience following a major hurricane and analyze its impacts on regional recovery and FEMA's steady-state interagency coordination practices.

Keywords: Recovery, Hurricane, Major Disaster Declaration, Urban Community, Federal Support, Infrastructure Systems, Resilience, Interagency Coordination, Identifying and Leveraging Resources, Partnerships

PART ONE

Figure 1. Hurricane Sandy's impacts were felt across 24 states. Source: Fema.gov

Background

On October 29, 2012, Hurricane Sandy struck the East Coast of the United States, resulting in severe impacts and substantial damage to the New York, New Jersey, and Connecticut region. Transportation networks were essentially shut down, major area airports were closed, and subways, rails, tunnels, and bridges across the region were severely impacted. Over 23,000 people were temporarily displaced and the damage from the storm totaled over $70 billion.

Shortly after the disaster, then-President Obama established the Hurricane Sandy Rebuilding Task Force to facilitate regional collaboration. In August 2013, the Hurricane Sandy Rebuilding Strategy was published, which provided recommendations for regional recovery and established new federal infrastructure guidelines for rebuilding efforts. The rebuilding strategy directed all federal agencies and recovery partners to work together to rebuild stronger and smarter, focusing on resilience outcomes, rather than simply restoring to pre-disaster conditions. The Sandy Recovery Office (SRO) was created with federal, state and local partners on January 15, 2014, to help plan and implement recovery projects and coordinate among the many state and local governments present in the impacted area.

SRIRC Objective:
Support regional resilience across federal infrastructure investments by gathering, discussing and considering technical information about planned and proposed projects to identify and seize opportunities to address scopes or timelines to facilitate implementation, consistent with grant requirements, and the Infrastructure Resilience Guidelines.

One major innovation of Hurricane Sandy recovery efforts was the establishment of the Sandy Regional Infrastructure Resilience Coordination (SRIRC) Group, an initiative formed by the SRO based on recommendations from the White House Task Force. The SRIRC played a major role in infrastructure repair efforts in the New York/New Jersey region following Hurricane Sandy and was made up of 32 federal, state and local government representatives, including grant managers, project managers, environmental review experts, and other relevant subject matter experts. The group was co-led by FEMA and the U.S. Department of Housing and Urban Development (HUD), with support from additional federal agencies with subject matter expertise.

Figure 3: Damaged homes in New Jersey following Hurricane Sandy. Source: New Jersey Future.

Challenges

The co-leads quickly convened a diverse set of partners who could coordinate assistance. The group overcame the following challenges:

- **Terminology**: Different agency "lingos" contributed to a language barrier between the representatives participating in the SRIRC. Taking the time to establish common terminology for terms such as "mitigation" and "resilience" and agree upon common goals in the middle of a large-scale disaster response was a tedious but crucial first step towards recovery progress.
- **Buy-In**: While state and local leadership were interested in the SRIRC's coordination role and the potential to maximize federal support, they expressed concerns rooted in the complexity of federal disaster response and recovery programs. The SRIRC co-leads worked persistently to gain state, county, and municipal commitment to participate in the group.
- **Logistics**: The SRIRC co-leads encountered numerous logistical challenges as they tried to establish the group and reach agreement on its shared goals and methods for achieving them. Points of contact for the

involved state authorities changed frequently, resulting in incorrect contact lists and repeated loss of crucial institutional knowledge related to infrastructure projects and other SRIRC efforts. Finding meeting locations was another challenge, as participants were spread out across multiple states and were not always able to travel long distances for regular, in-person meetings. Finally, scheduling meetings on dates and at times that worked for all participants, many of whom were high-level leadership at their respective agencies, was a constant hurdle. Even when agency representatives were actively participating in SRIRC meetings, frequent reach-back to their agencies was required to pull in the technical and subject matter experts needed to assist with ongoing projects, sometimes leading to a loss of traction and delay in progress.

PART TWO

Actions

An advisory group made up of key federal interagency high-level representatives met weekly to help design the structure and vision of the SRIRC and encourage a regional perspective for project planning. The larger SRIRC group began formally meeting in January 2014 to encourage ongoing interagency collaboration and discuss planning, permitting, technical reviews and other processes integral to facilitating and implementing successful, resilient infrastructure projects. These frequent meetings allowed for real-time adjustments to project plans, including addendums to funding opportunities such as Community Development Block Grant – Disaster Recovery (CDBG-DR) action plans.

As the group's work progressed, advisors were added to provide expertise on specific programs, such as Unified Federal Review, FEMA Public Assistance and HUD CDBG-DR. The SRIRC established three types of teams to drive progress on recovery initiatives:

- Project-based, adjunct teams, to address individual projects with unique complexities;
- Technical Coordination Teams, to identify opportunities to enhance resilience in five critical infrastructure sectors (Coastal Flood Management, Energy, Transportation, Wastewater Treatment, and Water Supply) and coordinate efforts on projects that crossed jurisdictional boundaries or were tied to a specific geographic area; and
- A federal review and permitting team made up of over 50 federal representatives, to ensure projects met all federal environmental, historic, and other legal requirements and identify potential roadblocks or implementation challenges early in the project timeline.

The SRIRC also provided technical expertise for the development of Infrastructure Resilience Guidelines, a set of core values that served as guidance for developing resilient infrastructure projects. The group provided oversight and monitored the implementation of these guidelines, including through the development of an infrastructure project database that tracked essential project information and alignment with the guidelines' resilience-focused approaches.

Results

The work of the SRIRC contributed to better stakeholder coordination and efficiency in decision-making, including a renewed focus on enhancing resilience while sequencing projects to minimize duplication of effort and maximize collaborative planning. The SRIRC collected data on the status of nearly 400 projects, collectively totaling over $27 billion in project costs. As of January 2020, 149 projects have been completed and another 125 are currently under construction. Other SRIRC efforts produced maps and reports to inform work efforts, increase transparency, minimize delays and create open lines of communication.

The various teams established by the SRIRC identified areas for improvement and potential challenges, provided briefings on overlapping program efforts, served as a source of knowledge and encouraged interagency collaboration. The geographic-based teams provided an initial structure to address projects that crossed multiple jurisdictional boundaries or sets of projects that were within a geographic area.

The usefulness of these teams and the massive coordination and data tracking efforts led by the SRIRC were the impetus for developing a collaborative geographic tool that displays the physical location of all ongoing recovery projects for a given disaster alongside a collaborative online platform, known as MAX-TRAX. MAX-TRAX is now used in disaster recovery missions across the country by FEMA and its partners from states, tribes, territories, local governments and interagency partners. MAX-TRAX allows for real-time tracking of progress toward recovery outcomes, can help identify potential opportunities for coordination as well as avoid duplication of efforts or funding, and serves as a common platform for collaboration, even in complex, large-scale missions.

Project Highlight: Bay Park Sewage Treatment Plant

The Bay Park Sewage Treatment Plant was originally built in the 1940s. In 2012, the plant processed sewage for approximately 550,000 people. Hurricane Sandy caused significant damage to approximately 50 structures, including mechanical and electrical systems and essential operating equipment. The plant was completely inoperable for three days, causing 100 million gallons of untreated sewage to flow into residential streets and another 2.2 million gallons of partly treated runoff to flow into local waterways. Since the plant provides a critical service for local residents, its restoration was a high priority.

The extensive damage to the plant prompted a comprehensive permitting and review process, overseen by the SRIRC. SRIRC staff helped to expedite the review process and obtain all required permits so reconstruction on the plant could begin in a timely fashion. Project leads also worked with the SRIRC to develop a mitigation plan for the plant. The plan provides mitigation recommendations consistent with a 500-year flood, including installation of a flood protection system around the boundary of the plant, elevation of critical equipment, upgrading to water-submersible equipment when feasible, and other floodproofing measures.

The SRIRC's coordination role also helped to identify mitigation opportunities that improved the overall resilience of the region ahead of the next disaster. As an example, three adjacent hospitals in New York City were each owned by a different entity: one by the city, one by the U.S. Department of Veterans Affairs, and one by a nonprofit academic institution. All three hospitals were at different flood depth levels, and therefore needed to mitigate their flood risk to different extents. The separate ownership also put the hospitals on different schedules for infrastructure repairs and improvement. The SRIRC was able to organize conversations with these diverse stakeholders, planting seeds that eventually resulted in both HUD and NYC partially funding The BIG U in 2014, a proposed flood wall protection system that would help protect 10 miles of low-lying infrastructure in New York City from storm surge as well as provide community recreational facilities. Though the BIG U and the three hospitals were all separate projects, the SRIRC's central collaboration role helped to align the scopes of work and convene stakeholders to prevent gaps in flood protection for the entire area.

The SRIRC, Federal Infrastructure Resilience Guidelines, and Technical Coordination Teams all encouraged a regional approach to disaster recovery and long-term resilience. This approach recognized that disaster impacts, recovery needs and resilience benefits are not isolated within political boundaries, and prompted leadership at the federal, state and local levels to work together and craft recovery solutions that would better prepare the region as a whole for the inevitable next disaster. This type of approach is particularly important in regions where multiple jurisdictions, government agencies, and economies operate, such as the New York/New Jersey/Connecticut region that was impacted by Hurricane Sandy.

Figure 6. A federal agency that has been a partner in the Sandy recovery effort is the Department of the Interior, which has invested in hundreds of resilience projects throughout the Atlantic Coast and worked with partners to stabilize beaches, restore wetlands and improve the hydrology of coastal areas. These efforts help protect local residents from future storms while creating jobs, engaging youth and veterans, and restoring habitat for wildlife. Source: Department of the Interior.

Finally, the SRIRC prompted and sustained a high-level, outcome-focused approach to disaster recovery. Because the SRIRC was convening diverse stakeholders and reporting out to multiple groups (including the FEMA Recovery Support Function Leadership Group [RSFLG] and the White House Task Force), they were able to elevate and bring attention to issues that arose during disaster recovery. The outcome-driven conversations that started within the SRIRC continued long after the group stepped back, providing localities with the framework and risk-reduction mindset to apply for other grant programs and leverage the coordination started by the SRIRC to get sustainable, innovative infrastructure projects off the ground years later.

Lessons Learned

- The SRIRC contributed to enhancing resilience for the New York/New Jersey region while also encouraging time-saving collaboration and reducing duplication of effort. Integrating long-term resilience considerations throughout the recovery process, from project planning through implementation, will better prepare the region for future coastal storms.
- Uniting leadership and stakeholders from all levels of government under a shared mission helped to facilitate recovery projects resulting in sustainable, resilient infrastructure outcomes.
- Successful implementation of large-scale infrastructure initiatives may be better managed from a regional perspective. Regional coordination allowed FEMA to facilitate increased cooperation and communication, instead of coordinating with each impacted community separately.
- Taking the time upfront at the beginning of a complex interagency and intergovernmental recovery process to have all stakeholders learn about each other's program requirements, resources, terminology and subject matter expertise can help establish trust and save partners from frustration further down the road.
- The federal interagency community realized that a longer-term coordination structure was needed to address future recovery efforts. This led to the development of the National Disaster Recovery Framework (NDRF) and the Recovery Support Function Leadership Group (RSFLG), which promotes coordination at the national level.
- The complexity of the Hurricane Sandy recovery effort highlighted the need for a permanent mechanism to rigorously track federal agency spending on disasters. As a result, the RSFLG developed a Program Management Office (PMO) to provide a platform for tracking federal recovery allocations. The PMO created a structured reporting method for interagency spending and maintains recovery.fema.gov, a public-facing website which displays both recovery allocations and outcomes.

Additional Resources

- SRIRC Overview Presentation
- Hurricane Sandy Rebuilding Strategy: Progress Report
- Hurricane Sandy Project Highlights
- FEMA Region II Hurricane Sandy Recovery
- Recovery.fema.gov
- For additional information about MAX-TRAX, email traxsupport@max.gov.