

Lessons from the Storm: Case Studies on Economic Recovery and Resilience



Galveston Island's Historic Pleasure Pier. Credit: Flickr user John Chandler

Texas Gulf Coast: Diversifying Disaster Recovery Investments for Long-term Economic Revitalization

Hurricane Ike Pummels the Texas Gulf Coast

During the early morning hours of September 13, 2008, Hurricane Ike slammed into the Texas Gulf Coast as an unusually large and powerful Category 2 storm. As Ike came ashore over the city of Galveston, Texas, the immense size of the storm resulted in an abnormally large storm surge (in excess of 20 feet), far reaching wind damage, and severe inland flooding due to heavy and prolonged rainfall.¹ After the storm cleared and the flooding receded, Ike left behind 84 fatalities and over \$12 billion in property damage within the State of Texas alone.^{2,3}

The 29 counties that were originally declared federal disaster areas in Ike's wake were home to over 26 percent of the state's business establishments.⁴ The region's primary economic sectors – oil and natural gas, tourism, and healthcare – were se-

verely disrupted by flooding, wind damage, and critical infrastructure outages. On the morning the storm hit, the *Houston Chronicle*'s headline read, "Powerless: More than 99 percent of region in the dark."⁵ And power outages were only part of the problem. The city of Houston was brought to a standstill as flooding and debris left highways impassable, buildings in disrepair, and streets littered with trees and wreckage.⁶

Along the coast, Galveston Island and the neighboring Bolivar Peninsula were two of the hardest hit areas. The Port of Galveston was temporarily shut down, offshore oil rigs and onshore petrochemical plants and refineries were idled, and Galveston's largest employer, the University of Texas Medical Branch (UTMB), was closed for several months due to damage incurred during Hurricane Ike. Galveston's historic downtown district was inundated with 10 feet of water and approximately 80 percent of the island's businesses experienced severe wind and water damage.⁷ On the neighboring Bolivar Peninsula, conditions were even worse. Ike destroyed 60 percent of the structures on the peninsula, with many areas leveled completely. In the small, tourism-dependent town of Gilchrist, only one home remained standing after the storm hit.⁸

This case study is part of a series produced by the NADO Research Foundation exploring how regional development organizations¹ have used 2008 disaster recovery funds from the U.S. Economic Development Administration (EDA) to address the impacts of natural disasters, become more resilient to future events, and increase long-term economic competitiveness and quality of life in their regions. This project is supported by EDA under Agreement No. 08-79-04379. Any opinions, findings, or recommendations expressed here are those of the author and do not necessarily reflect the views of EDA or the NADO Research Foundation.

Both Galveston and the Bolivar Peninsula are located within Galveston County, which is one of 13 counties served by the Houston-Galveston Area Council (H-GAC). H-GAC serves as the Upper Gulf Coast Region's Council of Government, providing transportation, economic development, and emergency planning services for the area. H-GAC also houses the Gulf Coast Economic Development District (GCEDD), which serves as the federally designated economic development planning body for the 13-county region. As such, H-GAC (via GCEDD) is responsible for the region's Comprehensive Economic Development Strategy (CEDS), which sets out a long-term economic vision for the region and plays a critical role in disaster planning and economic recovery.

A Regional Approach to Economic Recovery

As Ike dissipated and moved toward Arkansas, local governments throughout the region started grappling with the immediate needs of their communities. While they focused their attention on providing emergency services and removing debris, H-GAC began orchestrating a more comprehensive regional recovery effort. H-GAC immediately put its data library and GIS capabilities to work, mapping expected damage to critical local infrastructure such as power substations, wastewater treatment plants, schools, and local businesses. This information provided state, local, and federal leaders with a preliminary understanding of the damages so they could target their resources while they awaited full reports from time-intensive local inspections.

Anticipating that the U.S. Economic Development Administration's (EDA) Austin Regional Office would receive supplemental disaster funds to assist with recovery efforts, H-GAC also used its extensive network of local partners to identify projects that could be quickly implemented and have a meaningful impact on the long-term economic recovery of the area. Within three weeks, H-GAC and local leaders had identified nearly half a billion dollars in potential projects to submit to EDA. After performing site visits with EDA staff, the list of viable applications was narrowed and H-GAC (via the GCEDD) was ultimately allocated \$40 million in supplemental disaster funds to finance eight critical projects that addressed local needs and aligned with regional priorities.⁹



This section of downtown Houston's Travis Street was one of several roadways that were temporarily closed due to debris left by Hurricane Ike. Credit: Flickr user meltedplastic

Key Facts

EDA Funding: \$40 million

Other Funding: FEMA – \$1.5 billion; HUD CDBG – \$2 billion; HUD SSBG – \$90 million; SBA – \$500 million

Project Description: The Houston-Galveston Area Council and its subsidiary economic development district, the Gulf Coast Economic Development District, worked closely with stakeholders from the public, private, and non-profit sectors to help allocate over \$2 billion in recovery funds following Hurricane Ike. These funds supported a comprehensive recovery effort, with projects ranging from a revolving loan fund for small businesses and local governments to critical infrastructure repairs and housing replacements.

Key Outcomes: Stronger regional partnerships for disaster planning and economic development; smart investments that support both recovery and long-term growth; greater regional resilience to future storms and economic disruptions.

Partners: State and local government leaders; the non-profit and business community; the University of Texas Medical Branch (UTMB) at Galveston; the Port of Galveston; regionally-based offices of EDA, HUD, SBA, and other federal agencies.

Supporting Small Businesses, Local Governments, and Entrepreneurs

During the recovery planning process, H-GAC recognized the importance of getting local businesses back on their feet. While the enthusiasm was there, access to financial capital proved to be a real barrier for many business owners. To help local businesses tackle this problem, GCEDD secured \$10 million in EDA funding to capitalize a revolving loan fund (RLF) for recovery and economic development efforts. The RLF was originally restricted to private businesses, but after some initial success, applications began to decline. H-GAC attributed this to application fatigue among business owners, hesitation about collateral and reporting requirements, and growing competition from small, privately-funded loans with less burdensome requirements.

To overcome this setback, GCEDD recently expanded RLF eligibility to local governments who were severely impacted by Ike. According to Chuck Wemple, H-GAC's economic development program manager, "opening the RLF to local governments has been a great success so far. It caused a spike in applications and overall fund distribution, especially among small and rural localities that did not compete well in other recovery funding programs like the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Disaster Recovery (CDBG-DR) program. These communities still have a documented need, but the metrics used to allocate other program funds might not provide the best expression of that need, so it is important that we find other ways to support recovery efforts in these places."¹⁰

Loans have already been secured by local governments for everything from a new fire truck to the construction of a flood retention facility. Since local governments can tap into the RLF



Homes across the region were damaged or destroyed by Hurricane Ike. This Galveston Island neighborhood was particularly hard-hit. Credit: Flickr user Chuck Simmins

rather than relying on their general funds for upfront costs, they are able to maintain their traditional levels of service while investing in the recovery and resilience measures necessary to keep their area economically competitive.

Also recognizing the important role that entrepreneurs play in both the economic recovery and sustained growth of a region, H-GAC allocated \$10 million to repair and modernize the building that holds UTMB's biotech and biomedical incubator. Housed in the historic 1933 Customs House building, the incubator was already a model for adaptive reuse and an anchor for business creation in this burgeoning sector. However, the historic nature of the building put it at a greater risk for damage from storms. The renovations will include adaptation measures such as moving the building's electric and other critical equipment out of the basement to reduce the risk of service disruptions during future flooding events. Once complete, the expanded state-of-the-art space will provide labs, office space, and professional services to over two dozen promising companies.

Building Back Stronger

H-GAC, in collaboration with local leaders, also identified a number of public infrastructure projects with significant potential to improve the competitiveness of the region. The port of Galveston, a critical source of jobs and economic output, was awarded \$10 million in EDA disaster recovery funding to repair and upgrade outdated port facilities. According to Diane Falcioni, director of governmental relations and legislative affairs for the Port of Galveston, "We are one of the few ports in the State of Texas that is owned by the City and does not have any taxing authority. Since we are entirely reliant on operating revenues, these fixes would not have been possible without support from EDA." The majority of this funding, approximately \$7 million, was used to repair and expand several damaged pier aprons. These modernizations increased the port's capacity and sparked private investment in facilities along the piers, including \$10 million in

investment by Del Monte for upgrades to their refrigerated fruit warehouse.¹¹ The remaining EDA funds were used as a catalyst for revitalization of the port's underutilized east end which, once complete, will provide additional cargo storage and better intermodal connections to the surrounding region. Although the east end project is still underway, the port is already in negotiations with an importer that is interested in moving its business there once the project is complete. According to Falcioni, "This is just the latest example of the many ways that the initial infrastructure investments continue to provide not only an increase in business and revenue for [the port], but also more jobs and economic activity for the surrounding community... which in turn supports the ongoing recovery efforts of the region."¹²

Positioning Communities for Growth

The port was the largest infrastructure project in the region to be funded with EDA disaster recovery dollars, but there were several smaller projects supported by EDA that made a sizable impact on local communities. The city of Seabrook, Texas received \$3 million to rehabilitate and elevate Waterfront Drive. This flood-prone roadway is the main thoroughfare for The Point, an underdeveloped piece of waterfront property that has long been viewed as a "diamond in the rough",¹³ prime for redevelopment if investments are made to mitigate the risks to small businesses locating there.^{13, 14} The new street was recently completed and the city is now moving forward with a targeted code enforcement program to address vacant and blighted properties that could otherwise stall redevelopment efforts.¹⁵

Similarly, Nassau Bay, Texas received \$2.5 million to harden road, water, sewer, and power infrastructure for a new, mixed-use town square development. The project relocated streets, made major improvements to the stormwater system, and buried utilities to make the new development more resilient to future storms. The remainder of the \$3.13 million infrastructure project was funded by the developer, but the effort was facing a great deal of uncertainty before EDA dollars filled the growing gap in funding.¹⁶ The Town Square project was hamstrung by the confluence of Hurricane Ike, the economic downturn, and a



The Port of Galveston's east end revitalization project will provide additional cargo storage and better intermodal connections to the surrounding region. Credit: H-GAC

downsizing at NASA, one of the primary employers in the area, which all occurred shortly after the project broke ground. Although the combination of these events was enough to slow any large development, EDA funds provided just enough money to keep it moving forward. The Town Square was completed in 2012 and has greatly diversified the Nassau Bay economy by adding a hotel and conference center, multi-family residential units, and a mix of office and retail space in the new heart of the city.

“From Devastation to the Possibilities that Rebuilding Brings”

After Ike struck, billions of dollars in federal recovery funds flowed into the area. H-GAC was in charge of allocating over \$2 billion from EDA and HUD, with additional funds provided directly to businesses, local governments, and other affected parties through the Federal Emergency Management Agency (FEMA) and the Small Business Administration (SBA). Although the EDA funds made up only a small percentage of the total amount, they were essential for the region’s recovery. According to Wemple, “[The EDA funds] were the most nimble of the federal funds flowing into the region, which meant we were able to get them out the quickest. Most of the EDA funds were in the community within several months of the storm, whereas the first round of HUD CDBG-DR funds took nearly a year to go out. In these situations, speed is critical because infusing even a small amount of money into these communities following a disaster like Hurricane Ike builds morale and shifts the focus from devastation to the possibilities that rebuilding brings.”¹⁷



Pop-up art exhibits like the one shown above are organized throughout downtown Galveston to draw people and excitement into the community. Credit: Flickr user Galveston.com

Since Hurricane Ike hit in 2008, the population in the impacted area has grown by over 1 million residents.¹⁸ While many areas are still recovering, the EDA investments made following Ike have diversified local economies and made the region as a whole more resilient to future storms. The process was not without its complications, but by working closely with both the EDA regional office and local partners, H-GAC has been able to help the region grow back bigger, better, and stronger than before.

This case study was written by Lexie Albe, NADO Community and Economic Resilience Fellow.

¹ Mersereau, Dennis. "Five Years Later, Hurricane Ike Still Remembered Deep in the Hearts of Texans." Washington Post. 13 Sept. 2013. Web. 06 Nov. 2014. <<http://www.washingtonpost.com/blogs/capital-weather-gang/wp/2013/09/13/five-years-later-hurricane-ike-still-remembered-deep-in-the-heart-of-texas/>>.

² "Texas Rebounds: Helping Our Communities Recover from the 2008 Hurricane Season." Office of the Governor, 1 Nov. 2008. Web. <<http://governor.state.tx.us/files/press-office/Texas-Rebounds-report.pdf>>.

³ Fernandez, Manny. "In Texas, Extending the Miseries of Hurricane Ike." The New York Times 1 Oct. 2011. Web. 4 Nov. 2014. <http://www.nytimes.com/2011/10/02/us/extending-the-miseries-from-hurricane-ike.html?pagewanted=all&_r=0>.

⁴ "Hurricane Ike Impact Report." ESF #14 LCTR. FEMA, 1 Dec. 2008. Web. 2 Dec. 2014. <http://www.fema.gov/pdf/hazard/hurricane/2008/ike/impact_report.pdf>.

⁵ Cook, Lynn, and Kristen Hayes. "Powerless: More than 99 Percent of Region in the Dark." The Houston Chronicle 13 Sept. 2008. Web. 2 Dec. 2014. <<http://www.chron.com/default/article/Powerless-More-than-99-percent-of-region-in-the-1771780.php>>.

⁶ Texas Rebounds: Helping Our Communities Recover from the 2008 Hurricane Season." Office of the Governor, 1 Nov. 2008. Web. <<http://governor.state.tx.us/files/press-office/Texas-Rebounds-report.pdf>>.

⁷ Cast, Leah. "Galveston 5 Years after Hurricane Ike." Galveston Island Convention & Visitors Bureau. 12 Sept. 2013. Web. <<http://pressroom.galveston.com/release/3/galveston-5-years-after-hurricane-ike>>.

⁸ "Hurricane Ike Impact Report." ESF #14 LCTR. FEMA, 1 Dec. 2008. Web. 2 Dec. 2014. <http://www.fema.gov/pdf/hazard/hurricane/2008/ike/impact_report.pdf>.

⁹ Wemple, Chuck. "Challenges of Economic Recovery Following Natural Disasters - Insights Gleaned from Hurricane Ike." PERI Symposium: Community Recovery from Disaster. Public Entity Risk Institute, Mar. 2011.

¹⁰ Wemple, Chuck. Personal interview. October 7, 2014.

¹¹ "WGPOA Board Meeting Minutes." West Galveston Island Property Owners Association. Nov. 2012. Web. <<http://www.wgpoa.com/tx/wp-content/uploads/2012/11/poa337.pdf>>.

¹² Falcioni, Diane. Personal interview. November 4, 2014

¹³ Mulvaney, Erin. "Seabrook Has Plan to Emerge from Kemah's Shadow." The Houston Chronicle 20 Aug. 2013. Web. <<http://www.houstonchronicle.com/business/real-estate/article/Seabrook-has-plan-to-emerge-from-Kemah-s-shadow-4747938.php#0>>.

¹⁴ Mulvaney, Erin. "Seabrook Has Plan to Emerge from Kemah's Shadow." The Houston Chronicle 20 Aug. 2013. Web. <<http://www.houstonchronicle.com/business/real-estate/article/Seabrook-has-plan-to-emerge-from-Kemah-s-shadow-4747938.php#0>>.

¹⁵ Chavez, Paul. Personal interview. October 14, 2014

¹⁶ Braun, David. Personal communication. October 14, 2014

¹⁷ Wemple, Chuck. Personal interview. October 7, 2014

¹⁸ Wemple, Chuck. "Regional Councils: Roles in Recovery and Resiliency." Capacity-Builders, Conveners, Collaborators, and More: The Regional Development Organization's Role in Disaster Recovery. NADO Research Foundation. Webinar, 12 Aug. 2014.