

# **Lessons from the Storm**

Case Studies on Economic Recovery and Resilience



### Introduction

In the wake of natural disasters, local and regional economies are extremely vulnerable. Businesses can suffer costly damage, be cut off from supply lines, lose sales, and experience interrupted operations. In some cases, they may even be forced to close permanently. The Insurance Information Institute estimates that 15 to 40 percent of the businesses affected by natural and manmade disasters never reopen.<sup>2</sup> When businesses and industries fail or falter, the communities they serve can feel serious impacts, ranging from a lack of access to goods and services to the loss of income and jobs.

Communities and regions across the country are protecting their economies from the devastating consequences of disasters by putting innovative mitigation, response, and recovery strategies into action. They are providing post-disaster gap financing to small businesses in emerging sectors, rebuilding their downtowns and main streets in ways that are safe and resistant to the effects of extreme weather, and analyzing their economic vulnerabilities and addressing them through industry diversification and other means. They are also developing databases of business and infrastructure information to quickly identify recovery needs, helping businesses prepare for future events, and integrating disaster resilience into economic development and land use plans. These regions and communities are taking advantage of the opportunities natural disasters can provide to rebuild

Credit: Flickr user Jason St. Peter

# About the NADO Research Foundation

The National Association of Development Organizations (NADO) is a membership organization for the national network of over 520 regional development organizations (RDOs)<sup>1</sup> focused on strengthening local governments, communities, and economies through regional strategies, partnerships, and solutions. Founded in 1988, the NADO Research Foundation is the nonprofit research affiliate of NADO. The NADO Research Foundation identifies, studies, and promotes regional solutions and approaches to improving local prosperity and services through the nationwide network of RDOs. The Research Foundation shares best practices and offers professional development training, analyzes the impact of federal policies and programs on RDOs and their local communities, and examines the latest developments and trends in small metropolitan and rural America. For more information, visit <u>www.nado.org</u>.

This publication was supported by the U.S. Economic Development Administration (EDA) under Agreement No. 08-79-04379. Any opinions, findings, or recommendations expressed here are those of the authors and do not necessarily reflect the views of EDA or the NADO Research Foundation. better and stronger than before. While extreme weather events are traumatizing and bring many new challenges, they also offer chances to re-envision the community's future, identify strengths to capitalize on and weaknesses to address, and target recovery funding accordingly. For example, many communities and regions are focusing their recovery efforts on promoting development that is located out of harm's way, preserves important natural and working lands, and takes advantage of the historic buildings and traditional downtowns that attract and retain businesses and young people. Others are grasping the opportunity to think creatively about economic development, strengthen entrepreneurship programs, retrain the workforce, and take an asset-based approach that lays the groundwork for long-term wealth creation.

The Economic Development Administration (EDA), part of the U.S. Department of Commerce, plays a vital role in supporting economic recovery and resilience. Under the National Disaster Recovery Framework, a Federal Emergency Management Agency-established guide for coordinating disaster recovery efforts at all levels of government, the Department of Commerce—and EDA within it—leads the Economic Recovery Support Function. This Recovery Support Function, one of six, facilitates the integration of federal agency expertise to help local, state, and tribal governments and the private sector rebuild businesses and associated infrastructure and create sustainable and economically resilient communities.

Additionally, EDA's close relationship with the nation's approximately 380 Economic Development Districts (EDDs) enables it to provide effective disaster recovery funding to communities in need. EDDs are particularly well-positioned to lead regions through the recovery process. Their regional perspective and interdisciplinary focus—they manage and deliver economic development, land use, transportation, workforce, aging, small business, and other programs—allows them to promote the long-term competitiveness and sustainability of their regions as a whole. They have long-standing relationships with local governments, state and federal agencies, business owners, educational and medical institutions,

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and other key partners as well as proven abilities to foster intergovernmental and cross-sectoral collaboration. Additionally, they possess strong technical skills, broad expertise, and solid understanding of their regions' challenges and opportunities, and can provide critical capacity that local governments may lack.

This case study series highlights the efforts of four EDDs that received funding from EDA to help recover and rebuild from 2008 disasters in EDA's Austin region and nearby states.<sup>3</sup> The case studies demonstrate how regions have used that funding to address the impacts of natural disasters, become more resilient to future events, and increase economic competitiveness and quality of life. While every disaster and every region are unique, EDDs and other organizations can learn a lot from each other about planning for disasters during "blue-sky" periods, building partnerships, pursuing non-traditional funding sources, encouraging community engagement, and seizing the abundant opportunities to build back better following an event.

Unfortunately, severe weather and climate change have become costly and unpredictable parts of our lives. However, sharing stories and strategies through resources like these case studies can help us to be better prepared the next time the storm clouds gather.

<sup>&</sup>lt;sup>1</sup> The term "regional development organization" refers to the multi-jurisdictional regional planning and development organizations that exist throughout the country and are known by various names in different states, including councils of government, regional councils, economic development districts, local development districts, and planning and development councils. These public-based entities play an invaluable role in fostering intergovernmental collaboration among federal, state, and local officials; deliver and manage federal and state programs; and work to solve area-wide issues and to address the fundamental building blocks required for competitive and sustainable communities and economies. <sup>2</sup> Hartwig, Robert. Insurance Information Institute. Florida Case Study: Economic Impact of Business Closures in Hurricane Prone Counties. 2002. <sup>3</sup> EDA's Austin region consists of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas; this publication also contains a case study from Iowa. For more information on the EDA regions, visit www.eda.gov/contact.

# Southwest Arkansas: Promoting Disaster Resilience and Recovery through Better Data

ossatot River in southwest Arkansas. redit: Flickr user MyBiggestFan.

#### **Thirteen Tornadoes in Three Days**

In 2008, a series of storms—including Hurricanes Gustav and Ike and several tornadoes—swept across Arkansas. Seventy-two of the state's 75 counties were affected one or more times over the course of the year. Several counties experienced impacts from three or more natural disasters. Only three Arkansas counties escaped Federal Emergency Management Agency (FEMA) disaster declarations in 2008.<sup>1</sup>

Hurricane Gustav made landfall as only a Category 2 storm, but it hung over the south-central United States for days and inundated the region with tremendous amounts of water. Hurricane Ike, the third-costliest hurricane ever to make landfall in the U.S., followed just two weeks later, spawning severe weather with tornadic winds.<sup>2</sup> Arkansas experienced 13 tornadoes over a three-day period, two of which occurred within the Southwest Arkansas Planning and Development District's (SWAPDD) service area.

As the storms subsided and the floods receded, communities were left with the daunting tasks of cleaning up and repairing damaged infrastructure. Bridges and culverts needed replacing, roads needed resurfacing, and drainage ditches needed clearing. In parts of Arkansas, such as the economically distressed Mississippi River Delta region, these challenges came on top of the persistent poverty the area has grappled with for decades.

For state, regional, and local leaders, this series of natural disasters made it clear that businesses are tremendously vulnerable to extreme weather. They can suffer costly damage, be cut off from supply lines, lose sales, and experience interrupted operations. In some cases, they may even be forced to close permanently. When businesses and industries fail or falter, the communities they serve can feel serious impacts, ranging from the lack of access to goods and services to the loss of income and jobs. These impacts can be worsened if businesses are not adequately prepared for disasters or lack continuity plans, and if local and regional government partners do not have readily available tools and information to assist them in recovery efforts.

"Ike and Gustav had huge effects on our infrastructure, our businesses, and the health of our state and regional economies," says Renee Dycus, the executive director of SWAPDD. "After the storms, we were getting calls from some local elected officials, but in the chaos of the recovery process, they had so little time to figure out what assistance was available and ask for it. We would have liked to have had good baseline information to help us identify needs—especially the needs of the small businesses that play such an important role in the economy of rural Arkansas communities—and reach out proactively to local government and business partners."<sup>3</sup>

#### Better Data, New Equipment, and Job Training—A Win-Win-Win

Recognizing the need for better economic and infrastructure data that could be used for future disaster recovery efforts, SWAPDD worked with the Austin regional office of the U.S. Economic Development Administration (EDA) to develop a proposal to collect that information. SWAPDD is one of Arkansas' eight regional planning and development districts. The organization provides economic and workforce development, community planning, transportation, and waste management services and expertise to Calhoun, Columbia, Dallas, Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Ouachita, Sevier, and Union counties. SWAPDD staff had not traditionally been engaged in disaster recovery efforts, but after the 2008 events, a report released by the University of Arkansas at Little Rock's Institute for Economic Advancement highlighted the need to expand their services to address these challenges. The report detailed the vulnerability of Arkansas' businesses to natural disasters, found that their needs are often overlooked during disaster planning and recovery, and identified strategies that local, regional, state, and federal agencies could use to help businesses cope more effectively with disasters.<sup>4</sup> These recommendations motivated SWAPDD to take a more proactive role in preparing for future events.

SWAPDD received \$150,000 from EDA in 2009 to develop a comprehensive database of information on the employers and infrastructure in the region. For businesses, staff collected data on location, number of employees, and contact information when owners wished to provide it. For infrastructure, they gathered information on the locations of critical facilities and transportation infrastructure, as well



Businesses across Arkansas were damaged or destroyed by the 2008 tornadoes. This boat building business in the city of Clinton, in north central Arkansas, was particularly hard-hit. Credit: Vaughan Wingfield, UALR Institute for Economic Advancement.

#### Key Facts

#### EDA Funding: \$150,000

Other Funding: \$81,000 in State General Improvement Funds from the Arkansas Economic Development Commission; \$150,000 from the Delta Regional Authority <u>Project Description</u>: The Southwest Arkansas Planning and Development District used EDA disaster recovery funding to create a comprehensive database containing detailed geographic information about businesses and infrastructure that can be used to prepare for and rebound from natural disasters.

<u>Key Outcomes</u>: Increased economic resilience, faster recovery for businesses and infrastructure systems, streamlined application process for funding and technical assistance, more informed planning, stronger partnerships with local governments, potential replication around the state <u>Partners</u>: Delta Regional Authority; Arkansas Economic Development Commission; Arkansas Secretary of State; City of Stamps and other municipalities, including local water and sewer departments and emergency managers <u>Website</u>: www.swapdd.com

as the service areas and customer base numbers of all public water and wastewater systems. All data was collected in a format that could be mapped using ArcGIS.

In many cases, the data SWAPDD needed was not readily available, and staff had to go door-to-door to collect it, which was a costly effort. Leveraging the EDA grant, SWAPDD partnered with the City of Stamps to obtain \$81,000 in State General Improvement Funds through the Arkansas Economic Development Commission. These funds were used to hire a temporary employee for a oneyear period, purchase GPS mapping equipment, license GIS (geographic information system) software programs to SWAPDD, and buy a truck for use on the mapping project. At the end of the year, the employee had gained work experience and had developed a network of contacts with utility system operators who use GIS services. As a result, he was able to get a job as a full-time GIS drafter at an engineering firm. The truck was signed over to the City of Stamps, which needed a new city vehicle, and SWAPDD was left in possession of high-quality GPS equipment and GIS software, which they are using to serve the needs of member communities.

"We are a small community, and a free, essentially new vehicle is a really big deal for us. We'll probably get 10 to 12 years of use from that truck," says Ian Ouei, mayor of Stamps.<sup>5</sup>



The 2008 tornadoes impacted critical community infrastructure and facilities across the state, like this hospital in the city of Mountain View, in north central Arkansas. Credit: Vaughan Wingfield, UALR Institute for Economic Advancement.

SWAPDD also leveraged the EDA grant to obtain \$150,000 from the Delta Regional Authority for additional employer and infrastructure mapping and economic resilience planning in four Delta counties within their region.<sup>6</sup>

#### "Responding Faster to Community Needs"

The benefits of the new database are already clear. First, it will help southwest Arkansas recover from future disasters much faster and more effectively. It establishes a baseline for the region's economy which can be overlaid with geographic information about a disaster's impacts—such as floods and tornado tracks—to immediately estimate the number of affected businesses and employees. Additionally, it will help government agencies quickly identify damage to infrastructure systems and mobilize repair efforts. "After an event, we will be able to determine immediately which businesses were affected and need assistance, how many employees are out of work, where our infrastructure needs repairing, and other information that will help us get our economy back up and running," says Dycus.<sup>7</sup>

The database will also be used to pre-fill applications for post-disaster funding and technical assistance. It allows SWAPDD staff to enter basic information about a community into an application form with a few keystrokes on the computer, instead of having to manually type it out. They have already made use of this function. "The database and the pre-filled applications have already saved us a phenomenal amount of time and allowed us to respond faster to community needs," Dycus says. "After the 2008 floods, we were able to submit 40-50 applications instead of the ten our staff would be able to write without the database."  $^{\rm 8}$ 

The database's usefulness isn't limited to disaster recovery. It provides SWAPDD and local governments with a comprehensive source of detailed and up-to-date information about the economy, physical infrastructure, and demographics that can be used for various planning activities. For example, SWAPDD is using the data to develop Hazard Mitigation Plans for two member counties. The database also helps SWAPDD respond to day-to-day requests from communities. "Recently, a stakeholder called and asked for information about the fire department locations in our region, and we were able to create a map right away," notes Dycus.<sup>9</sup>

Additionally, with the database's rich information about community characteristics and needs, it can help SWAPDD identify potential federal and state funding opportunities for local partners, submit applications, request letters of support for projects, and fill out environmental review and other forms with the touch of a button. "Southwest Arkansas Planning and Development District called us out of the blue and asked if we would like to apply for funds for a community center. We didn't have to call them—they knew the funding was available, they knew we needed a community center, and they called us," says Marion Hoosier, mayor of the Town of McCaskill. "We ended up getting a grant for \$208,000 that we didn't even know was out there."<sup>10</sup>

The database is maintained by SWAPDD as an internal tool, and local governments pay a small monthly fee to keep their water and wastewater information current. SWAPDD's new GIS staff person uses those funds to constantly update the database. "This project will never end," says Dycus. "Our collection of information will be ongoing,

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D ID	-	BUS_NAME +	BUS_COUNT +	LONG +	LAT
Þ	2458	Arkla Connections	Columbia	-93.243534397	33.26863
2	2459	At Your Service	Columbia	-93.244503701	33.28099
2	2460	Atwoods #33	Columbia	-93.217734207	33.26309
2	2461	auto sales	Columbia	-93.249548687	33.29280
2	2462	B & D Equipment Sales and Service	Columbia	-93.198465737	33.25896
2	2463	Bailey Funeral home	Columbia	-93.214865139	33.28104
2	2464	Bailey's Body Shop	Columbia	-93.248529306	33.29210
2	2465	Bayou Bistro	Columbia	-93.236788487	33.27757
2	2466	Beene Family Dentistry	Columbia	-93.23891081	33.27292
2	2467	Big Boy Toys the interior story dba	Columbia	-93.214502625	33.27167
2	2468	Big Worm Textbooks	Columbia	-93.235109406	33.28778
2	2469	Blue Moon Art Studio	Columbia	-93.242059745	33.26692
2	2470	Brittany's Holiday Shoppe	Columbia	-93.241848859	33.26755
2	2471	Brookshire's	Columbia	-93.218662432	33.26302
2	2472	Burke's Outlet	Columbia	-93.244309466	33.26773
2	2473	Car Mart	Columbia	-93.214254535	33.29307
2	2474	Carpet one	Columbia	-93.244686688	33.26712
2	2475	Carter Credit union	Columbia	-93.215333202	33.27594

The database includes information on business location, number of employees, and contact information. Credit: SWAPDD.

and we will continue to update the database so we will always have the most accurate and useful data."<sup>11</sup>

This project has had the additional benefit of strengthening relationships with local water and sewer departments and emergency managers in the region. Previously, SWAPDD had only worked with local water and sewer staff on a limited basis and had never interacted with county emergency managers. These new partnerships help SWAPDD staff better understand community needs, keep them connected with local planning activities, and allow them to coordinate and prioritize District-wide activities.

#### "Major Players in Disaster Resilience and Recovery"

SWAPDD and its member communities have already received multiple benefits from EDA's investment of disaster recovery funds, but they are not stopping there. This project has shown staff the importance of being engaged in disaster-related issues. "I think planning and development districts are major players in disaster resilience and recovery," says Dycus. SWAPDD staff are exploring the possibility of incorporating disaster preparedness into their EDArequired Comprehensive Economic Development Strategy and looking at how they can become more active partners with communities to enhance local pre-disaster planning and preparation. Furthermore, as they continue to expand the database, they are considering adding information

"After an event, we will be able to determine immediately which businesses were affected and need assistance, how many employees are out of work, where our infrastructure needs repairing, and other information that will help us get our economy back up and running."

-Renee Dycus, Executive Director, Southwest Arkansas Planning and Development District

about flooding and other natural hazards that could help to inform future development decisions.<sup>12</sup>

The benefits of SWAPDD's work are also spreading outside of southwest Arkansas. Seeing how critical GIS information is to communities as they prepare for and recover from disasters, regional planning and development districts throughout the state are looking at how they can replicate this effort. SWAPDD has already shared its database with other regions so they can populate it with their own information. This project is showing that comprehensive, up-to-date data is a critical piece of disaster preparedness and recovery.

This case study was written by Megan McConville, NADO Program Manager.

<sup>&</sup>lt;sup>1</sup> EDA Disaster Response and Preparedness Plan. University of Arkansas at Little Rock Institute for Economic Advancement. 2010. iea.ualr.edu/ pubs/2010/10-04%20EDA\_DRPP.pdf.

<sup>&</sup>lt;sup>2</sup> Hurricane Ike Impact Report. Federal Emergency Management Agency. 2008. www.fema.gov/pdf/hazard/hurricane/2008/ike/ impact report.pdf.

<sup>&</sup>lt;sup>3</sup> Dycus, Renee. Personal interview. June 17, 2013.

<sup>&</sup>lt;sup>4</sup> EDA Disaster Response and Preparedness Plan. University of Arkansas at Little Rock Institute for Economic Advancement. 2010. iea.ualr.edu/ pubs/2010/10-04%20EDA\_DRPP.pdf.

<sup>&</sup>lt;sup>5</sup> Dycus, Renee. Personal communication. August 29, 2013.

<sup>&</sup>lt;sup>6</sup> Dycus, Renee. Personal interview. June 17, 2013.

<sup>&</sup>lt;sup>7</sup> Dycus, Renee. Personal interview. June 17, 2013.

<sup>&</sup>lt;sup>8</sup> Dycus, Renee. Personal interview. June 17, 2013.

<sup>&</sup>lt;sup>9</sup> Dycus, Renee. Personal interview. June 17, 2013.

<sup>&</sup>lt;sup>10</sup> Dycus, Renee. Personal communication. August 29, 2013.

<sup>&</sup>lt;sup>11</sup> Dycus, Renee. Personal interview. June 17, 2013.

<sup>&</sup>lt;sup>12</sup> Dycus, Renee. Personal interview. June 17, 2013.

East Central Iowa: On-the-Ground Assistance and Business Loans Support Recovery and Economic Competitiveness

A "1 in 500" Chance Flood

In the spring and summer of 2008, months of snowmelt and heavy rainfall in Iowa saturated the Upper Mississippi River basin, the Cedar River, and the Iowa River. Iowa had experienced devastating floods in 1851, 1966, and 1993, but 2008 brought the worst flooding in many communities' histories. Eighty-five of the state's 99 counties were declared disaster areas that summer.<sup>1</sup> The Cedar River, adjacent to the city of Cedar Rapids, broke the previous crest record by 11 feet with a 30 foot crest on June 13. The flood waters hit the 500-year floodplain, an area of the city with only a 1 in 500 chance of flooding each year. Fourteen percent of the city was impacted by flooding, with most of downtown submerged.<sup>2,3</sup>

The floodwaters slowly receded at the end of June. Residents returned to decimated homes, neighborhoods, schools, roads, and businesses. When the Rebuild Iowa Office Coordinating Council conducted a survey of 13 communities impacted by the floods, they found that over 2,000 businesses closed for at least 24 hours due to property damage or lack of access. At least 2,000 jobs were permanently lost in the surveyed communities because of the floods.<sup>4</sup>

The 2008 event reminded lowans of their vulnerability to flooding. This time around, local leaders didn't want to simply rebuild what previously existed, but to restore their communities and their economies in ways that made them more vibrant, sustainable, and disaster-resistant than be-

fore. The East Central Iowa Council of Governments (ECICOG) supported these efforts, designing its regional recovery strategy to diversify the economy, provide flexible financial capital options to businesses, and promote business continuity planning. The result was a strong recovery and a regional economy more resilient to future natural and man-made disasters and other economic shocks.

Cedar River outside of downtown Cedar Rapids.

Credit: Flickr user CR Artist.

#### **Bringing in Hands-On Help**

ECICOG is an intergovernmental planning agency that serves Benton, Iowa, Johnson, Jones, Linn, and Washington counties in east central Iowa. It supports local efforts and regional cooperation on housing, community and economic development, infrastructure, and transportation planning and implementation. In response to the 2008 floods, ECICOG used federal dollars to support two disaster recovery coordinators and create a revolving loan fund.

In October 2008, the organization received a \$300,000 grant from the U.S. Economic Development Administration (EDA) to fund two disaster recovery coordinators to guide community members through the process of applying for federal and state financial assistance after the floods. One of the coordinators focused on homeowners, helping residents find funding for home rehabilitation, assistance with mortgage and down payments, and financing for new construction. This coordinator also helped ECICOG manage a Federal Emergency Management Agency-funded residential buyout and demolition program.

#### **Key Facts**

<u>EDA Funding</u>: \$300,000 for disaster recovery coordinators; \$1.5 million for a revolving loan fund

<u>Other Funding</u>: \$85,000 from the Washington County Riverboat Foundation

<u>Project Description</u>: The East Central Iowa Council of Governments used EDA disaster recovery funding to hire two disaster recovery coordinators and create a revolving loan fund to help businesses purchase property and equipment and access working capital after the devastating floods of 2008.

<u>Key Outcomes</u>: Direct support for 153 businesses and 184 homeowners, increasing access to funding and technical assistance opportunities; over \$3 million in loans to over 27 businesses, leveraging \$29.5 million in other funding; 652 private sector jobs created or saved; increased financial capital options for businesses; faster business recovery; diversified industry base; more resilient regional economy

<u>Partners</u>: Washington County Riverboat Foundation <u>Website</u>: www.ecicog.org

The second disaster recovery coordinator focused on local businesses, connecting business owners with funding opportunities to help with rent and lost inventory, equipment, and supplies. This person was also responsible for administering the Jumpstart Business Program, a statefunded forgivable loan program that assisted 80 businesses in east central lowa after the flood.<sup>5</sup>

#### Filling the Financial Capital Gap

ECICOG knew that the lack of access to financial capital was a major barrier to businesses' recovery from the floods, and to the recovery and resilience of its regional economy as a whole. In response to this challenge, ECICOG secured a \$1.5 million EDA grant to establish a revolving loan fund (RLF) in October 2008. To assemble the required match contribution, the Washington County Riverboat Foundation donated \$85,000 and ECICOG contributed \$15,000.<sup>6</sup>

The RLF is operated by ECICOG and the loan decisions are made by an RLF Loan Committee comprised of representatives from local banks, a credit union, an entrepreneurial development center, and a small business development center in the region. Loans are available to businesses that were impacted by flooding and that need gap financing. Funded projects must create or preserve jobs and strengthen the regional economy. Loans can be used to purchase real estate and equipment and for working capi-

tal. The maximum loan amount is \$250,000, but the average loan award is \$50,000. The terms of the loans typically run from five to seven years. The loan closing fee is 2 percent of the award, and the interest rates are fixed, below market rates.<sup>7</sup>

Traditional lending institutions' primary considerations when making a loan are the applicant's current equity, the cost of the project, and the likelihood of repayment. As a result, these institutions are often unwilling to make loans to businesses for the full amount requested. ECICOG requires that projects receive two-thirds of their financing from private lenders, but ECICOG is willing to fund up to the remaining third of the project.<sup>8</sup> ECICOG's RLF also differs from traditional lending mechanisms in that the RLF Loan Committee considers the impact of the business on the regional economy.<sup>9</sup> ECICOG's RLF provides businesses with much-needed equity on reasonable terms to bridge important projects' financing gaps.

The RLF also promotes economic diversification, supporting sectors in which the region has a competitive advantage and an interest in expanding. Biosciences, advanced manufacturing, and information and financial services are targeted by the RLF for start-ups and business development. "The loan review committee has given considerable attention to encouraging applications and recommending loan awards in a variety of sectors including manufacturing, technology, service, and medical," says Doug Elliott, ECICOG's executive director.<sup>10</sup> A diverse economic structure with thriving businesses and jobs in a range of industries will make east central lowa more resilient to future shocks, whether those are caused by natural disasters, the closing of a company, or the downturn of a key sector.



*The view of flooded 3rd Avenue in downtown Cedar Rapids. Credit: Flickr user Matt Herzberger.* 

#### "A Huge Help in a Very Difficult Time"

Though the disaster recovery coordinators were only funded for two years, their impacts were far-reaching. "It takes a significant amount of time to recover from a major disaster both economically and physically," says Elliott. "However, I'd say the majority of affected individuals and businesses had been identified and provided with or directed to resources within the best of our ability within that two-year period."<sup>11</sup>

By 2010, the coordinators had provided support to 153 businesses and 184 homeowners.<sup>12</sup> Brad Tischer, owner of Brogan's Bar and Grill in Palo, Iowa, says, "I felt the program was run very well by ECICOG because of its outstanding people. [The coordinators] did an amazing job and were easy to work with. They really cared about the small businesses and their troubles recovering from the floods of 2008. They were a huge help in a very difficult time."<sup>13</sup> The disaster recovery coordinators helped connect small businesses to the RLF. One of those businesses was Cedar Ridge Vineyards. Owners Jeff and Laurie Quint had purchased 27.5 acres of cropland in east central Iowa in 2003, developing the land into a successful vineyard and opening a winery in downtown Cedar Rapids. When the winery was damaged during the 2008 floods, the RLF Loan Committee awarded Cedar Ridge Vineyards a \$150,000 loan to purchase new machinery that was critical to its operations. The vineyard anticipates that it will create 30 new jobs by 2015 with the help of the ECICOG loan.<sup>14</sup>

"I'm involved with a few different growth-oriented companies that were devastated by the 2008 floods," says Jeff Quint. "While the financial assistance programs were slow



Former Acting Secretary of Commerce Rebecca Blank, former Assistant Secretary of Commerce for Economic Development John Fernandez, and Ovation CEO Larry Selensky tour the facilities of Ovation Networks, an RLF recipient. Credit: USDOC.

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-Brad Tischer, Owner, Brogan's Bar & Grill, Palo, IA

to develop after the disaster, they were a godsend in terms of our ability to stay in business. Of all the agencies we worked with to sort through our financing options, I can say without a doubt that ECICOG was the most focused and reactive to our needs."<sup>15</sup>

The RLF also helped businesses that are directly involved in disaster preparedness and response. For example, Inteconnect, Inc., located in Cedar Rapids, provides secure technology systems to businesses. During the 2008 floods, Inteconnect's customers did not experience any service outages because the data center was located outside of the flooded area. Inteconnect's customers were still able to connect to servers, email, and telephones from their offices or remotely from their homes. After the floods, Inteconnect was awarded a \$55,000 loan to market its secure technology products and services to more businesses. Inteconnect plans to create seven new jobs by 2015.<sup>16</sup>

#### **Building on Success**

The revolving loan fund has played a key role in business recovery and growth in east central lowa. As of September 2013, the RLF had deployed 27 loans with over \$3 million. These loan dollars leveraged an estimated \$29.5 million from other sources. ECICOG estimates that these investments have created 325 private sector jobs and saved 327 private sector jobs.<sup>17</sup>

Because of the proven success of the RLF, EDA provided a \$2.9 million grant in 2011 to recapitalize the fund. ECICOG assembled the required \$195,000 match in just two weeks with contributions from Linn County, Washington County, Benton County, Jones County, Johnson County, the Cedar Rapids Area Chamber of Commerce (now part of the Cedar Rapids Metro Economic Alliance), the Greater Cedar Rapids Community Foundation, and other organizations. The new EDA award expanded ECICOG's RLF to almost \$5 million and allowed ECICOG to continue providing low-interest loans to new and existing businesses throughout the region.<sup>18</sup>

ECICOG's disaster recovery and resilience work has not been limited to the RLF and the technical assistance provided by the disaster recovery coordinators. The organization has also created a database of communities and businesses that have been affected by disasters, developed a database of programs that are available to assist communities and businesses after disasters, and created a library of recovery support and emergency response procedures. Additionally, ECICOG has developed hazard mitigation plans with its partner communities and provided continuity planning assistance to businesses.

#### **Challenges and Opportunities**

ECICOG's flood recovery and resilience successes have not come without challenges. Residents and businesses were frustrated that federal, state, and local assistance did not arrive quickly enough after the event, and that funding agencies did not provide support with the application process. The disaster recovery coordinators helped to mitigate these issues but could not eliminate them.<sup>19</sup>

Another frustration was the lack of communication among different stakeholders in the wake of the disaster. The

roles of local, regional, and state agencies were not clear. ECICOG helped to address this issue by serving as a convener. For instance, ECICOG brought the Iowa Homeland Security and Emergency Management Division and the Rebuild Iowa Office together to clarify their roles in future disaster response and recovery efforts.<sup>20</sup>

Despite these challenges, ECICOG was able to contribute to the region's recovery from the 2008 floods and make its economy stronger and more resilient than it was before. The organization leveraged federal investments to provide critical hands-on help to residents and businesses in the short term, and to establish a self-sustaining source of financial capital that will support business start-ups and growth and diversify the economy over the long term. With these strategic investments, ECICOG simultaneously met immediate recovery needs and created a resource that will support economic competitiveness in east central lowa for years to come.

This case study was written by Alexandria Murnan, NADO Community and Economic Resilience Fellow.

<sup>1</sup> Saulny, Susan. "After Iowa Flood, Feeling Just a Bit Ignored." The New York Times. August 27, 2009. www.nytimes.com/2009/08/28/ us/28cedar.html?\_r=0.

<sup>3</sup> Maag, Christopher. "In Eastern Iowa, the City That 'Would Never Flood' Goes 12 Feet Under." The New York Times. June 13, 2008. www.nytimes.com/2008/06/13/us/13flood.html.

- <sup>5</sup> Dekoter, Tracy. "Eastern Iowa Council of Governments." Entrepreneurial Development Center, Inc. www.edcinc.org/articles/view.php?id=43.
  <sup>6</sup> East Central Iowa Council of Governments. "Business Assistance Revolving Loan Fund." www.iarcog.com/ECICOG\_presentation-RLF marketing.pdf.
- <sup>7</sup> Gravelle, Steve. "Regional business loan fund expands to \$4.5 million." The Gazette. August 30, 2011. thegazette.com/2011/08/30/regional-business-loan-fund-expands-to-4-5-million/.
- <sup>8</sup> Gravelle, Steve. "Regional business loan fund expands to \$4.5 million." The Gazette. August 30, 2011. thegazette.com/2011/08/30/regionalbusiness-loan-fund-expands-to-4-5-million/.
- <sup>9</sup> East Central Iowa Council of Governments. "Business Assistance Revolving Loan Fund." www.iarcog.com/ECICOG\_presentation-RLF\_marketing.pdf.
- <sup>10</sup> Elliott, Doug. Personal interview. September 24, 2013.
- <sup>11</sup> Elliott, Doug. Personal interview. September 24, 2013.
- <sup>12</sup> East Central Iowa Council of Governments. *Final Report: EDA Stafford Act Recovery Grant*. 2010.
- <sup>13</sup> East Central Iowa Council of Governments. Revolving Loan Fund Recipient Quotes. 2012.
- <sup>14</sup> Elliott, Doug. Memorandum to East Central Iowa Council of Governments Board of Directors. September 18, 2012.
- <sup>15</sup> East Central Iowa Council of Governments. Revolving Loan Fund Recipient Quotes. 2012.
- <sup>16</sup> Elliott, Doug. Memorandum to East Central Iowa Council of Governments Board of Directors. September 18, 2012.
- <sup>17</sup> Elliott, Doug. Memorandum to East Central Iowa Council of Governments Board of Directors. September 18, 2012.

<sup>&</sup>lt;sup>2</sup> City of Cedar Rapids. Flood of 2008 Facts & Statistics. www.cedar-rapids.org/government/departments/public-works/engineering/Flood% 20Protection%20Information/Pages/2008FloodFacts.aspx.

<sup>&</sup>lt;sup>4</sup> East Central Iowa Council of Governments. *Final Report: EDA Stafford Act Recovery Grant*. 2010.

<sup>&</sup>lt;sup>18</sup> Gravelle, Steve. "Regional business loan fund expands to \$4.5 million." The Gazette. August 30, 2011. thegazette.com/2011/08/30/regionalbusiness-loan-fund-expands-to-4-5-million/.

<sup>&</sup>lt;sup>19</sup> East Central Iowa Council of Governments. *Final Report: EDA Stafford Act Recovery Grant*. 2010.

<sup>&</sup>lt;sup>20</sup> East Central Iowa Council of Governments. *Final Report: EDA Stafford Act Recovery Grant*. 2010.

# **Greater New Orleans: Building on Competitive Advantages to Strengthen Economic Resilience**

Royal Street, downtown New Orlean Credit: Flickr user .distracted.

### Hurricanes Gustav and Ike Underscore the Gulf's Economic Vulnerability

In September 2008, just three years after Hurricanes Katrina and Rita, the Gulf Coast was hit by two Category 2 hurricanes, Gustav and Ike. While they were not as severe as the 2005 storms, Gustav and Ike brought widespread property damage and economic disruption. Like previous Gulf Coast hurricanes, they had serious impacts on the three sectors that have traditionally driven the regional economy-oil and natural gas, fishing, and tourism. Offshore oil rigs, pipelines, refineries, and supporting industries were damaged or destroyed by high winds, waves, and storm surge, particularly during lke. The severe weather also ravaged hundreds of acres of oyster beds, caused habitat loss through erosion and saltwater intrusion into freshwater areas, wrecked vessels and docks, and damaged processing and other facilities-impacts that could depress the commercial and recreational fishing industries for years.<sup>1</sup> Beaches were badly damaged and tourist areas that should have been busy at the start of convention season were devastated. All sectors were affected by power outages, fuel shortages, and the temporary loss of the workforce due to evacuations, transportation issues, and personal property damage.<sup>2</sup>

These shocks to the Gulf Coast's major employers and rev-<br/>enue generators were unfortunate reminders of the re-<br/>gion's economic vulnerability. Prior to the 2008 hurricane<br/>season, regional and local leaders were already concernedparish region of southeast Louisiana, which includes Jeffe<br/>son, Orleans, Plaquemines, St. Bernard, St. Charles, St.<br/>James, St. John the Baptist, St. Tammany, Tangipahoa, an<br/>Washington parishes. The organization assists with busi-

about their reliance on the oil and gas, fishing, and tourism industries and were looking for ways to diversify the economy.<sup>3</sup> Moreover, the national perception of the area as vulnerable to natural disasters was compromising its ability to attract and retain businesses. Gustav and Ike underscored the need to think creatively about the region's competitive advantages and strengthen emerging sectors. Greater New Orleans, Inc., The Idea Village, the New Orleans BioInnovation Center, and the Downtown Development District of New Orleans leveraged U.S. Economic Development Administration (EDA) disaster recovery funds to do just that. The success of these projects, and their collective impact on New Orleans' economy, illustrates the importance of understanding regional economic assets and working collaboratively-across different types of economic and business development organizations as well as across sectors—to capitalize on them.

#### Institutionalizing a Regional Approach to Economic Development

Greater New Orleans, Inc. (GNO, Inc.) was one of the organizations leading the early discussions about how New Orleans' regional economy could adapt to natural disasters and changing national and global markets. GNO, Inc. is a regional economic development alliance serving a tenparish region of southeast Louisiana, which includes Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Tammany, Tangipahoa, and Washington parishes. The organization assists with business retention, growth, and attraction and supports policy development, workforce programs, research, and marketing efforts that improve regional business conditions.<sup>4</sup> GNO, Inc. realized that a regional approach to economic development was critical to greater New Orleans' future resilience. In 2008, the organization received \$750,000 from EDA to initiate innovative and collaborative mar-keting of the region.<sup>5</sup>

The EDA grant supported the expansion of business development activities, including targeted market missions and familiarization tours. In order to guide this work, GNO, Inc. established a parish partner network with representation from economic development organizations from each of the ten parishes it serves. This network was founded to plan the market missions and familiarization tours, but over the course of the two-year grant period, it became a forum for more comprehensive and strategic discussions about regional economic development. The relationships created have grown even stronger since then. GNO, Inc. continues to hold monthly meetings with the network, a practice that started with the awarding of the EDA grant. The effective partnerships among parish-based economic development organizations have helped to attract the attention of site selectors, recruit businesses, and strengthen the region's industry diversity. Additionally, the messaging and marketing efforts of the parish-based economic development organizations are now aligned with each other and with regional and state programs.<sup>6</sup>

With the support of the parish partner network, GNO, Inc. completed eight market missions in the U.S. and abroad, targeting companies in the bioscience, digital and creative media, advanced manufacturing, and energy sectors. During these missions, staff—often working alongside partner agencies or industry groups—met with 75 companies who



This oil platform was damaged beyond repair when Ike passed through the Gulf of Mexico. Credit: Flickr user Dean Terry.

#### **Key Facts**

<u>EDA Funding</u>: Greater New Orleans, Inc.--\$750,000; The Idea Village--\$800,000; New Orleans BioInnovation Center--\$1.25 million; Downtown Development District of New Orleans--\$750,000

<u>Other Funding</u>: Significant funding from federal and state agencies, foundations, and corporate partners

<u>Project Description</u>: These four organizations worked together on a variety of projects to strengthen and diversify New Orleans' regional economy by supporting entrepreneurship, attracting and retaining talent, and building up the water management, life sciences, digital media, arts, and other sectors.

<u>Key Outcomes</u>: Stronger regional collaboration around economic development; clear understanding of regional competitive advantages; a more diversified and resilient regional economy; a vibrant entrepreneur community; growing numbers of small businesses; national and global recognition of New Orleans as a home for creative, knowledge-based businesses

<u>Partners</u>: State of Louisiana; City of New Orleans; parish governments; local and national universities; local and national companies; business leaders

<u>Websites</u>: www.gnoinc.org; www.theideavillage.org; www.neworleansbio.com; www.downtownnola.com

had expressed interest in relocating to or expanding in greater New Orleans.  $^{7}$ 

GNO, Inc. and the parish-based economic development organizations also hosted seven familiarization tours for national site selection consultants and industry leaders. The tours highlighted local assets, recent investments, incentives, and other competitive advantages that make the region attractive for business growth. Through the process of organizing, executing, and evaluating these tours, GNO, Inc. developed a successful format that both showcases the entire region and benefits the individual parishes. The first half day of each tour highlighted the broader region and included representatives from all parishes, and the remaining time was spent focusing on two or three parishes.<sup>8</sup> These tours improved site selectors' perceptions of the region and generated significant positive publicity, such as an article in Site Selection magazine titled 'The New Orleans Miracle.<sup>9</sup> Like the other EDA-funded activities described here, these tours also changed the way GNO, Inc. did business-the organization now conducts them as a regular part of its work.<sup>10</sup>

"The EDA grant allowed us to engage our parish partners in regional economic development, something that was



After one of its reporters went on a familiarization tour of the region, Site Selection magazine covered New Orleans' revival. Credit: Site Selection.

not happening before but is working really well now," says Robin Barnes, executive vice president and chief operating officer of GNO, Inc. "It was also transformational in building GNO, Inc.'s capacity to market the region."<sup>11</sup> The grant supported training and capacity-building for GNO, Inc. staff on economic development, sales and marketing, public incentive deal structuring, industrial real estate, and business retention. In turn, staff draw on their new knowledge to provide technical assistance to the parishes on marketing, responding to requests for proposals, and closing deals. The grant also funded the development of marketing materials on topics such as regional assets related to the target sectors, each specific parish's assets, available incentives, and press coverage of economic development in the region.<sup>12</sup>

In 2010, the final year of the grant, GNO, Inc. and the parishes worked together on business development projects that resulted in 2,041 new and retained jobs—a record high for GNO, Inc. in one year.<sup>13</sup> But perhaps more importantly, the EDA grant helped to solidify the region's economic identity and brand for national and international audiences. It allowed the parishes to develop consistent messaging and amplify it by proactively and collaboratively engaging site selectors, industry leaders, and the media. "The approaches we piloted through this grant have been institutionalized at GNO, Inc. and in the parishes," says Barnes. "They are the cornerstones of our regional economic development work today."<sup>14</sup>

GNO, Inc. has been able to leverage the work done with its 2008 EDA disaster recovery grant to obtain additional

funding for regional economic development and diversification. For example, in 2010, GNO, Inc. received another EDA grant of \$175,000 and \$100,000 from the Catalyst Foundation to conduct a feasibility study for its Emerging Environmental Initiative.<sup>15,16</sup> The study assessed emerging industries and technologies that can help to address environmental challenges and evaluated their alignment with regional capabilities. For instance, because of the region's issues with flooding and coastal losses, local companies and entrepreneurs are at the forefront of the growing water management sector. Overall, the study identified 13 sectors as good fits for the New Orleans region, including coastal restoration and water management, disaster mitigation, biorefinery development, and sustainable hazardous waste management. "This study built our capacity to be an effective economic development organization in a booming region that remains vulnerable to natural and other disasters," says Barnes.<sup>17</sup> With \$250,000 from the blue moon fund and a subsequent award from EDA in 2012, GNO, Inc. has begun to implement the initiative.<sup>18</sup>

#### "A Catalytic Investment...for the Entrepreneurial Movement"

While GNO, Inc. used its EDA disaster recovery grant to market the New Orleans region to companies in emerging sectors, The Idea Village used its funding for the complementary activity of strengthening entrepreneurship. The Idea Village is a nonprofit organization with a mission to identify, support, and retain entrepreneurial talent in New Orleans.<sup>19</sup> After Hurricane Katrina, the city saw an influx of skilled, highly educated people who came to aid recovery, such as business students from major universities across the country. The Idea Village's leadership recognized this new talent as an asset to New Orleans and wanted to find a way to keep it there.<sup>20</sup>

The organization received \$800,000 from EDA to build on its existing IDEAcorps initiative—an experiential learning program that engages MBA students to provide strategic consulting to select high-growth New Orleans entrepreneurs—and organize the first New Orleans Entrepreneur

"The EDA grant allowed us to engage our parish partners in regional economic development, something that was not happening before but is working really well now. It was also transformational in building GNO, Inc.'s capacity to market the region."

-Robin Barnes, Executive Vice President and Chief Operating Officer of GNO, Inc.

Week, which took place in March 2009. This event attracted 42 students from the nation's top business schools who joined forces with leading professionals to help six New Orleans entrepreneurs refine their strategic plans and grow their businesses.<sup>21</sup> One of the businesses receiving assistance that week was Naked Pizza, a small New Orleans pizza shop focusing on healthy ingredients that now has over 450 franchises around the world.<sup>22</sup>

"The EDA grant was a catalytic investment that helped build the infrastructure for the entrepreneurial movement and bring it to scale in New Orleans," says Tim Williamson, cofounder and CEO of The Idea Village. Entrepreneur Week has now grown into an annual Entrepreneur Season that engages government, universities, corporations, nonprofits, and individuals to identify, support, and retain New Orleans startup ventures by providing educational services, strategic consulting, and experiential learning. The season, which runs from July–March, includes workshops, seminars, one-on-one strategy sessions, and an accelerator program. It culminates in New Orleans Entrepreneur Week, now a well-known festival of entrepreneurship hosted in downtown New Orleans that attracts over 3,000 people. Of the startups that have participated in Entrepreneur Week since 2009, 81 percent are still in business and 85 percent are still in New Orleans. These businesses have From 2009–2013, The Idea Village has leveraged \$11 milattracted \$79 million in private capital, brought in \$75 million in annual revenue, and created 1,034 jobs. "Not only do these events provide direct assistance to local entrepreneurs, they create a network of leaders around the world who believe in and want to support New Orleans' businesses," says Williamson.<sup>23</sup>

Entrepreneur Week and Entrepreneur Season also support the emerging sectors that New Orleans' leaders have identified as key parts of its economic future. For example, they host the Water Challenge, a collaboration between

"The EDA grant was a catalytic investment that helped build the infrastructure for the entrepreneurial movement and bring it to scale in New Orleans... [It] provided a platform for industries in emerging sectors to connect with each other, learn from more established businesses, and strengthen the overall ecosystem of those sectors."

-Tim Williamson, Cofounder and CEO, The Idea Village

The Idea Village and GNO, Inc. to support entrepreneurs who are developing technologies and services that provide efficient, cost-effective, and sustainable means of dealing with Louisiana's water issues. The Water Challenge provides those entrepreneurs with strategic consulting, mentoring, peer networking, and an opportunity to pitch their business ideas to investors.<sup>24</sup> "The EDA investment provided a platform for industries in emerging sectors to connect with each other, learn from more established businesses, and strengthen the overall ecosystem of those sectors," says Williamson.<sup>25</sup>

lion in private and federal funding, including Community Development Block Grant dollars from HUD, to expand its entrepreneurship programs. "The EDA grant showed confidence in our work to other national foundations and organizations who have since funded us," notes Williamson.<sup>26</sup>

#### Promoting New Orleans' Entrepreneurial Community to the World



The Downtown Development District of New Orleans

New Orleans Entrepreneur Week culminates with The Big Idea, where entrepreneurs pitch their ventures to the audience, who then invest in their favorite companies by allocating the voting chips they purchased with their tickets. Credit: The Idea Village.



The Downtown NOLA Works website profiles the people behind some of New Orleans' most successful companies and initiatives and describes why they chose the city's downtown as their home and workplace. Credit: DDD.

(DDD) also used its EDA grant of \$750,000 to attract and retain talent, specifically to the city's downtown. "After Katrina, some of the country's best and brightest came to New Orleans to be part of something bigger than themselves—rebuilding one of the greatest American cities," says Kurt Weigle, president and CEO of the DDD. "We wanted to build on that movement and attract additional talented, skilled, and creative people to our city."<sup>27</sup>

The DDD's grant, awarded in March 2009, was focused on bringing "creative class" workers and others in knowledgebased sectors—specifically digital media, music, arts-based life sciences. The city is home to four major universities businesses, and biosciences—to live and work downtown. It funded survey and focus group research on the lifestyle and professional preferences of key demographics, the development of a downtown brand strategy to appeal to the target industries and audiences, and the creation of a strategy to disseminate information about research findings and branding to property owners and managers, developers, planners and architects, real estate brokers, public officials, and others who shape the downtown environment.28

The survey and focus group research revealed that reliable public transportation, walkable neighborhoods, ample public spaces and gathering places like cafés and parks, and internet bandwidth and connectivity are high priorities for the target demographics when choosing a place to live and work. Based on these findings, the DDD emphasized the availability of these amenities in New Orleans through its marketing materials and at industry conferences while simultaneously working to improve them. For example, the DDD has supported the revitalization of the

Theatre District and promoted the city's Cultural Districts.<sup>29</sup>

The DDD also used the research findings as a basis for its downtown brand strategy. The brand strategy highlighted the strengths of downtown New Orleans-including its architectural character, walkability, variety of housing options close to offices and amenities, and social and entertainment opportunities—through new logos, new websites for Downtown NOLA and Downtown NOLA Works, a smartphone app, newsletters, brochures, maps, Facebook, and Twitter. The DDD presented and marketed the new brand through media outreach, its Leading Minds breakfast series for downtown stakeholders, its "coffee talk" series with local marketing and communications professionals, and at industry conferences, business development events, and festivals. For instance, DDD staff participated in Austin, Texas' annual South by Southwest music, art, and tech festival to promote New Orleans' growing digital media industry and Louisiana's economic development incentives. Similarly, they attended "Only in Louisiana," an event held in Los Angeles the day before the Grammys to connect New Orleans businesses with film, music, and digital media companies. Additionally, the DDD co-hosted Entrepreneur Week with The Idea Village, helping to feature downtown venues and opportunities.<sup>30</sup>

#### Capitalizing on New Orleans' Biotechnology Competitive Advantage

The New Orleans BioInnovation Center (NOBIC) focuses on one of the growing sectors of New Orleans' economy, the Loyola University, Tulane University, the University of New Orleans, and Xavier University—that generate a significant amount of research. NOBIC is a biotechnology business incubator that helps to commercialize that research, support entrepreneurs, and grow existing businesses.<sup>31</sup>

NOBIC received \$1.25 million from EDA for planning and architectural fees for its facility. This was critical assistance, covering half of the overall planning and architectural costs that accompanied \$47 million in construction funding from the State of Louisiana.<sup>32</sup>

Construction started in 2009, and the facility opened in downtown New Orleans in 2011. It includes state-of-theart labs and office space that are rented to startups, conference and meeting space, and additional labs that are leased by existing companies. Its 35 tenant businesses focus on health services and healthcare information technology, medical devices and diagnostic equipment, environmental solutions, and more. At full capacity, the facility is expected to hold between 40 and 50 companies.<sup>33</sup>

However, NOBIC's services go beyond simply providing physical space. Its staff—experts in science, business, and law—work proactively with researchers at the four partner universities to commercialize their technologies and launch businesses. Teams of fellows and interns gather information about the technologies being developed, assess their market potential, identify commercialization options, and develop business plans. NOBIC also provides educational programming for researchers on topics such as entrepreneurship, financing, and technology leadership. Additionally, networking opportunities are hosted at the BioInnovation Center to bring scientists, venture capitalists, management professionals, and business development specialists together.<sup>34</sup>

"When you look at what New Orleans was before Katrina, the economy was primarily focused on tourism, the oil industry, and a few other things. City leaders were looking to diversify and build up the knowledge-based economy even before the storm. The BioInnovation Center was created to do just that as part of the recovery," says Aaron Miscenich, president of the Center. "We already had the raw ingredients of a thriving life sciences sector, including billions of dollars of investments in clinical and research facilities. The programming was the missing piece, and that's what we provide."35

NOBIC has already supported the startup of 75 companies and the creation of over 200 jobs. It has provided its clients with \$25 million in private equity, helped them access \$3 million in federal Small Business Innovation Research/ Small Business Technology Transfer grants, and equipped them to win various business planning competitions.<sup>36</sup>

The BioInnovation Center is also supporting New Orleans' emerging water technology sector. GNO, Inc. uses an EDA grant to fund a water technology fellow on the Center's



One of the state-of-the-art labs in the New Orleans BioInnovation Center. Credit: NOBIC.

"We put a lot of thinking and research into what the new direction of the economy should be, and we realized that while we have unique problems in New Orleans, we also have unique competitive advantages."

-Kurt Weigle, President and CEO, Downtown Development District of New Orleans

staff who focuses on the commercialization of waterrelated technologies used for remediation, stormwater management, aquaculture, and other purposes.<sup>37</sup>

Like The Idea Village, NOBIC's work helps recruit and keep talent in New Orleans. "The BioInnovation Center grows businesses and creates jobs, but we also do a lot more," says Miscenich. "For example, the universities were seeing a lot of turnover among their researchers after Katrina. We help to attract and retain faculty by providing the opportunities they are looking for. More and more faculty want to work at institutions where they can start businesses around their promising technologies."<sup>38</sup>

#### "America's Comeback City"

Thanks in part to EDA's investments and the work of GNO, Inc., The Idea Village, the DDD, and the BioInnovation Center, New Orleans has become a hub of entrepreneurship and an attractor of talent and capital. Forbes named the city the "Biggest Brain Magnet" of 2011 as well as the No. 2 "Best City for Jobs."<sup>39</sup> A 2010 Brookings Institute report found that the city's entrepreneurial activity is 40% higher than the national average, and Inc., a magazine for small businesses, called it the "Coolest Startup City in America."<sup>40</sup> More broadly, New Orleans' thriving and diversified economy is increasing the opportunities available in the region, enhancing quality of life for residents, and building resilience to future natural and man-made economic shocks. New Orleans is truly living up to the nickname being given to it by local leaders—"America's Comeback City."

The success of New Orleans' economic reinvention demonstrates the importance of collaboration. The staff of GNO, Inc., The Idea Village, and the DDD worked closely together long before they received the EDA disaster recovery funding, coming together around a vision for the regional economy and coordinating to implement it. "We put a lot of thinking and research into what the new direction of the economy should be, and we realized that while we have

unique problems in New Orleans, we also have unique

competitive advantages," says Weigle of the DDD. "For example, our city is a place that inspires great creative work—creative people have been coming here for over 200 years now. We knew we could leverage that by nurturing the arts sector as well as other industries that require different types of creativity like digital media and bioresearch."<sup>41</sup> Other partners, such as the City of New Orleans, the local universities, the Urban League, and various companies were critical to these projects' success.

GNO, Inc., The Idea Village, the DDD, and the BioInnovation Center also recognized the central role of New Orleans' downtown in its economic renewal. They have successfully promoted its historic neighborhoods, walkable layout, and unparalleled amenities to entrepreneurs, small business owners, and other potential transplants. For example, Destination GNO, a website developed by GNO, Inc., provides a curated tour showcasing the assets of the city center, as well as nearby communities offering walkable neighborhoods, cultural opportunities, and recreational amenities.<sup>42</sup> Additionally, the four organizations profiled in this case study have all located their own offices downtown. For instance, The Idea Village is in a former law office that is now home to 80 companies, situated in the Warehouse District, a vibrant neighborhood full of restaurants, bars, parks, shopping, and homes. "This is the coolest part of the city—you can live, work, and play here," says Williamson. "It's the perfect place to be at the center of the city's entrepreneurial movement."43

# This case study was written by Megan McConville, NADO Program Manager.



The BioInnovation Center is a home for 35 budding life sciencesrelated businesses in downtown New Orleans, providing them with space, business development support, and educational and networking opportunities. Credit: NOBIC.

<sup>&</sup>lt;sup>1</sup> Weber, Paul. "Gulf Coast Fishing Industry Crippled by Hurricane Ike." Lubbock Avalanche-Journal. September 27, 2008. lubbockonline.com/ stories/092708/bus\_337425386.shtml.

<sup>&</sup>lt;sup>2</sup> Louisiana Economic Development. "Economic Impact of Hurricanes Gustav and Ike on Louisiana." 2008. www.doa.louisiana.gov/cdbg/dr/pdf/ GustavIkeEconomicImpact.pdf.

<sup>&</sup>lt;sup>3</sup> Hurricane Ike Impact Report. Federal Emergency Management Agency. 2008. www.fema.gov/pdf/hazard/hurricane/2008/ike/ impact\_report.pdf.

<sup>&</sup>lt;sup>4</sup> Greater New Orleans, Inc. www.gnoinc.org.

<sup>&</sup>lt;sup>5</sup> Barnes, Robin. Personal communication. February 24, 2014.

<sup>&</sup>lt;sup>6</sup> Barnes, Robin. Personal communication. February 24, 2014.

<sup>&</sup>lt;sup>7</sup> Barnes, Robin. Personal communication. February 24, 2014.

<sup>&</sup>lt;sup>8</sup> Barnes, Robin. Personal communication. February 24, 2014.

<sup>&</sup>lt;sup>9</sup> Starner, Ron. "The New Orleans Miracle." Site Selection. March 2011. www.siteselection.com/ssinsider/snapshot/new-orleans.cfm.

<sup>&</sup>lt;sup>10</sup> Barnes, Robin. Personal interview. October 8, 2013.

- <sup>11</sup> Barnes, Robin. Personal communication. February 24, 2014.
- <sup>12</sup> Barnes, Robin. Personal communication. February 24, 2014.
- <sup>13</sup> Barnes, Robin. Personal communication. February 24, 2014.
- <sup>14</sup> Barnes, Robin. Personal interview. October 8, 2013.
- <sup>15</sup> The Emerging Environmental Initiative was originally called the Sustainable Industries Initiative.
- <sup>16</sup> Greater New Orleans, Inc. "Global Analysis Reveals Opportunities in Sustainable Industries for the Greater New Orleans Region." May 10, 2011. www.sailcapital.com/sites/default/files/Sustainable\_Industries\_Initiative\_FINAL.pdf.
- <sup>17</sup> Barnes, Robin. Personal interview. October 8, 2013.
- <sup>18</sup> Greater New Orleans, Inc. "Global Analysis Reveals Opportunities in Sustainable Industries for the Greater New Orleans Region." May 10, 2011. www.sailcapital.com/sites/default/files/Sustainable\_Industries\_Initiative\_FINAL.pdf.
- <sup>19</sup> The Idea Village. www.ideavillage.org.
- <sup>20</sup> Williamson, Tim. Personal interview. October 30, 2013.
- <sup>21</sup> Adams, Cameron. Personal communication. December 16, 2013.
- <sup>22</sup> Fields, Jonathan. "How Naked Pizza Grew from 1 to 450 Stores in 18 Months." No date. www.jonathanfields.com/blog/naked-pizza/.
- <sup>23</sup> Williamson, Tim. Personal interview. October 30, 2013.
- <sup>24</sup> The Idea Village. 2014 Water Challenge. www.ideavillage.org/what\_we\_do/capital\_village/water\_challenge/.
- <sup>25</sup> Williamson, Tim. Personal interview. October 30, 2013.
- <sup>26</sup> Williamson, Tim. Personal interview. October 30, 2013.
- <sup>27</sup> Weigle, Kurt. Personal interview. January 6, 2014.
- <sup>28</sup> Carter, Anthony. Personal communication. January 17, 2014.
- <sup>29</sup> Carter, Anthony. Personal communication. January 17, 2014.
- <sup>30</sup> Carter, Anthony. Personal communication. January 17, 2014.
- <sup>31</sup> New Orleans BioInnovation Center. www.neworleansbio.com.
- <sup>32</sup> Miscenich, Aaron. Personal interview. October 30, 2013.
- <sup>33</sup> Miscenich, Aaron. Personal interview. October 30, 2013.
- <sup>34</sup> New Orleans BioInnovation Center. www.neworleansbio.com.
- <sup>35</sup> Miscenich, Aaron. Personal interview. October 30, 2013.
- <sup>36</sup> Miscenich, Aaron. Personal interview. October 30, 2013.
- <sup>37</sup> Miscenich, Aaron. Personal interview. October 30, 2013.
- <sup>38</sup> Miscenich, Aaron. Personal interview. October 30, 2013.
- <sup>39</sup> The Idea Village. Our Story. www.ideavillage.org/who\_we\_are/our\_story/#sthash.WsFdummG.dpuf.
- <sup>40</sup> The Idea Village. Our Story. www.ideavillage.org/who\_we\_are/our\_story/#sthash.WsFdummG.dpuf.
- <sup>41</sup> Weigle, Kurt. Personal interview. January 6, 2014.
- <sup>42</sup> Greater New Orleans, Inc. Destination GNO. www.destinationgno.com.
- <sup>43</sup> Williamson, Tim. Personal interview. October 30, 2013.

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

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

#### 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.<sup>1</sup> 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.<sup>2,3</sup>

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.<sup>4</sup> The region's primary economic sectors – oil and natural gas, tourism, and healthcare – were severely 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."<sup>5</sup> 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.<sup>6</sup>

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.<sup>7</sup> 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.<sup>8</sup>

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.<sup>9</sup>

# 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 busi-



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.

<u>Key Outcomes</u>: 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 nonprofit and business community; the University of Texas Medical Branch at Galveston; the Port of Galveston; regionally-based offices of EDA, HUD, SBA, and other federal agencies.

Website: www.h-gac.com

nesses, but after some initial success, applications began to decline. H-GAC attributed this to application fatigue among business owners, hesitance 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 chief operating officer, "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."<sup>10</sup>

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



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

into the RLF 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.<sup>11</sup> 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," prime for redevelopment if investments are made to mitigate the risks to small businesses locating there.<sup>13, 14</sup> The new street was recently



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.

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.<sup>15</sup>

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.<sup>16</sup> The Town Square project was hamstrung by the confluence of Hurricane Ike, the economic downturn, and a 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

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-Chuck Wemple, Chief Operating Officer, Houston-Galveston Area Council



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.

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."<sup>17</sup>

Since Hurricane Ike hit in 2008, the population in the impacted area has grown by over 1 million residents.<sup>18</sup> 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.

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

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

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

<sup>4</sup> Hurricane Ike Impact Report. Federal Emergency Management Agency. 2008. www.fema.gov/pdf/hazard/hurricane/2008/ike/ impact\_report.pdf.

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

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

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

<sup>8</sup> Hurricane Ike Impact Report. Federal Emergency Management Agency. 2008. www.fema.gov/pdf/hazard/hurricane/2008/ike/ impact\_report.pdf.

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

<sup>10</sup> Wemple, Chuck. Personal interview. October 7, 2014.

<sup>11</sup> WGIPOA Board Meeting Minutes. West Galveston Island Property Owners Association. November 2012. www.wgipoa.com/tx/wp-content/ uploads/2012/11/poa337.pdf.

<sup>12</sup> Falcioni, Diane. Personal interview. November 4, 2014.

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

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

<sup>15</sup> Chavez, Paul. Personal interview. October 14, 2014.

<sup>16</sup> Braun, David. Personal communication. October 14, 2014.

<sup>17</sup> Wemple, Chuck. Personal interview. October 7, 2014.

<sup>18</sup> 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. August 12, 2014.



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