



RECOVERY & RESILIENCE PLAN

Hurricane Ian Recovery Strategy





Table of Contents:

Executive Summary7

Building the Plan..... 15

Recovery Initiatives 31

Planning & Capacity 43

Infrastructure..... 58

Natural Resources..... 96

Housing..... 123

Economic Recovery..... 153

Education & Workforce..... 170

Health & Social Services 187

Cultural Resources..... 205

Appendices218

Acknowledgements

Many stakeholders contributed to this planning process including the Recovery Task Force, Branches, and community members who generously shared their time, energy, and expertise to develop the Lee County Recovery and Resilience Plan. More than 6,000 stakeholders provided input to inform and refine the recovery Initiatives described in this document. Additionally, County and city staff provided expertise and analysis in identifying the Plan’s recommended actions, participating in workshops, collaborative agenda-setting sessions, and intergovernmental discussions. This Plan represents a fully voluntary, cross-sector and multi-jurisdictional approach to strategic recovery.

RECOVERY TASK FORCE MEMBERS

Agency	Title	Liaison
Lee Board of County Commissioners	Commissioner	Kevin Ruane, Chair
Constitutional Office	Property Appraiser	Matt Caldwell, Vice-Chair
City of Bonita Springs	Councilman	Chris Corrie
City of Cape Coral	Mayor	John Gunter
Village of Estero	Mayor	Jon McLain
City of Fort Myers	Mayor	Kevin Anderson
Town of Fort Myers Beach	Council Member	Bill Veach
	Council Member	Karen Woodson
City of Sanibel	Councilwoman	Holly Smith
Lee County Sheriff’s Office	Undersheriff	John Holloway
Lee County Fire Chiefs Association	Fire Chief	Robert Dilallo
Lee County School Board	Chairman	Armor Persons
Lee Health	Board Member	David Collins
Legislative Delegation	Representative	Jenna Persons-Mulicka

Planning & Capacity Branch Members

Branch Lead: Sandy Stillwell Youngquist

Alvin Henderson	Lisa Swinto	Steve Belden
Danny Ballard	Matthew Leger	Ashley Leger, Alternate
David Farmer	Megan Strayhorn	Jeanie Richards, Alternate
David Mintz	Ron Martin	Sally Kreuzscher, Alternate
Eric Pfeifer	Stephanie Wardein	Scott Wirth, Alternate
Jennifer Hagen		

Economic Recovery Branch Members

Branch Co-Lead: Chad Criswell

Branch Co-Lead: Dominic Cameratta

Ben Siegel	John Lai	Steven Weathers
Ben Spence	Jonathan Gabel	Tim Abbott
Bill Johnson, Jr.	Kevin Barbot	Tim Mitchel
Donna Germain	Kyle Moran	Jen Whyte, Alternate
Frank Bonafilia	Rob Wells	Lindsay Burch, Alternate
Jacki Lyszak	Robert Galloway	Anne Rose, Alternate
Jay Johnson	Ryan Markham	Alvin Henderson, Alternate
Jim Magnus	Shane Spring	

Education & Workforce Branch Members

Branch Lead: Dr. Mike Martin

Dr. Denise Carlin	T. Sharon Woodbery	Charles Pease, Alternate
Katy Errington	Mike Wukitsch	Kristy Rigot, Alternate
Jamie Lienhardt-Engle	Jamie Weisinger	Dr. Amir Borges Ferreira Neto, Alternate
Dr. Guido A. Minaya	Todd Everly	Jon Zehnder, Alternate
John Roth	Phyllis Calloway	Melissa Kruse, Alternate
Laura Siebenmorgen	Dr. Jennifer Cupid-McCoy, Alternate	Alvin Henderson, Alternate
Dr. Aysegul Timur		

Health & Social Services Branch Members

Branch Lead: Troy Churchill

Dana Begley	Angela Katz	David Koester, Alternate
Dawn Belamarich	Jorge M Quiñonez, M.D.	Blair Fretwell, Alternate
Nicole Calderone	Ken Smith	Bradley Alix, Alternate
Greg Dewitt	David Brown	Lauren Ware, Alternate
Therese Everly	Stefanie Ink-Edwards	Karen Kriegerly, Alternate
Dr. Tom Felke	Jeannine Joy	Alvin Henderson, Alternate
Julie Ferguson	Maria Espinoza	Lorri Philbin, Alternate

Infrastructure Branch Members

Branch Lead: Ryan Carter

David Cambareri	Ian Schmoyer	Mark Ridenour, Alternate
Paul Clinghan	Mikes Maillakakis	Chris George, Alternate
Dave Kistel	Fred Edman	David Willems, Alternate
Bill Ribble	Linda Miller	Alvin Henderson, Alternate
Rick Schooler	Denise Vidal	Joanne Ribble, Alternate
Mike Welch	Trish Lassiter	David Deetscreek, Alternate
Jason Sciandra	George Smith, Alternate	Justin Mahon, Alternate
Steven Sarkozy	James Hayden, Alternate	Rod Allen, Alternate

Housing Branch Members

Branch Lead: Gary Griffin

Bradley Alix	Jan-Erik Hustrulid	Desi Wynter, Alternate
Kevin Besserer	Dan O'berski	Nikki Alexander, Alternate
Marion Briggs	Chris Simoneau	Milica Babic, Alternate
Marcia Davis	Amy Yearsley	Amy Frith, Alternate
Richard F. Durling	Sharon Ralston	Alvin Henderson, Alternate
Lee Ford	Karen Rodriguez	Nathan Shaw, Alternate

Mary Gibbs

Malania Mote

Karen Vaughn, Alternate

Diana Giraldo

Becky Guttery, Alternate

Natural Resources Branch Members

Branch Lead: Dan DeLisi

Daniel Andrews

Casey Streeter

Bill Ribble, Alternate

Ryan Berger

Matt Caldwell

Deb Oorton, Alternate

Chadd Chustz

Holly Milbrandt

Richard Thompson, Alternate

James Evans

Emily Porter

David Willems, Alternate

Kate Gooderham

Fred Forbes

Alvin Henderson, Alternate

Joanne Ribble

Dr. Ron George

Matt De Paolis, Alternate

Dr. Maya Robert

Randall Jones

Melissa Perez-Gonzalez, Alternate

Dr. Mary Beth Saunders

Justin Mahon

Samantha Selbach, Alternate

Bethany Brosious

Chris Wittman, Alternate

Hans Wilson, Alternate

Cultural Resources Branch Members

Selynto Anderson

Matt Johnson

Cory Demmel

Lydia Antunes Black

Teresa Watkins Brown

Alvin Henderson, Alternate

Michael Flanders

Liz Bello-Matthews

Anna Lazzizzera, Alternate

Janel Trull

Charles Barnes

Marco Villalobos, Alternate

Will Prather

Shelly Walton



EXECUTIVE SUMMARY

Executive Summary

This Recovery and Resilience Plan (Plan) is a recommended roadmap developed by the Recovery Task Force that may be used in whole or in part by Lee County and its municipalities to support their unique communities in building back from and continuing to thrive despite the devastating impact of Hurricane Ian. Hurricane Ian became tied for the fifth-strongest hurricane on record and the third-costliest hurricane on record when it made landfall in September 2022. The storm resulted in considerable harm and disruption to life, property, the economy, and the environment throughout the County. In developing this Plan, Lee County seeks to restore the essential and beloved places, services, and socioeconomic connections that make the County a desirable and unique place to live, work, play, and visit.

The Plan documents a strategic vision based on shared Initiatives that may support recovery across the County and its municipalities. This Plan describes the community needs approximately one year into recovery and recognizes that disaster recovery is often achieved through the efforts of a large coalition of multi-sector stakeholders. Solutions to community needs are presented via Initiatives in eight key recovery areas.

KEY RECOVERY AREAS



In total, 43 recommended recovery Initiatives in these eight key areas represent strategic actions that, if implemented, can address the identified unmet community needs and increase the resilience of Lee County to future disasters while maintaining the prized and unique elements of each of its neighborhoods.

Post-Ian Reconstruction
Volunteer Contributions



Rebuilding Together Signage
Pine Island



Donation Collection
Pine Island Community Church



Post-Ian Destruction

Plan Scope

This Plan describes strategic approaches with regional benefits that also empower the local communities within Lee County to recover from Hurricane Ian according to their own needs and priorities. Throughout this Plan, “regional” most often refers to Lee County, its unincorporated area, and the six municipalities within the County. Local leaders, longtime residents, and service organizations all have pointed to the wisdom of jurisdictions spending time and resources to contribute to larger approaches that may provide direct and indirect benefits. Cross jurisdictional working groups can improve collaboration on regional applications – which is an opportunity to share best practices and a criterion for winning many federal grants. Working regionally can also produce resilience benefits. Regional resources or assets such as a mobile healthcare network established to provide services in “blue skies” (i.e., non-emergency times) can be designed or redesigned for activation in times of crisis to respond to areas of the County that are in need. This “regional approach” to recovery and resilience aims to enable a more expedient, holistic, and sustainable recovery that results in local and collective progress.

The Plan is intended to be a starting point to promote effective coordination and participation between the government, private sector, community-based organizations, and the public at large based on recovery priorities approximately one year after Hurricane Ian. The Plan contains 43 recommended recovery Initiatives to inform long-term recovery decision-making and specific project/program development among jurisdictions. Each Initiative articulates an approach to how the County, its municipalities, and community partners can work together to advance the desired objective. Much of this work will be voluntary.

Many Initiatives describe key potential projects and logical next steps to initiate work in the subject areas. For example, hardening water infrastructure is underway with the undertaking of Public Assistance and Hazard Mitigation Grant Program projects, which will restore and improve existing water delivery systems. Several of the initiatives around housing also have opportunities under the HUD Community Development Block Grant-Disaster Recovery funding, which is addressed in a separate Action Plan.

As Lee County advances through long-term recovery, the specific needs, priorities, and resources of the residents, municipalities, County, and region may evolve. These situational changes may shift the understanding of the most appropriate and effective recovery actions. However, the recovery focus areas and Initiatives described in this Plan are reflective of community values and aligned with long-term jurisdictional management plans to encourage sustained, cohesive progress – particularly in the areas that sustained the most damage from Hurricane Ian.



County Vision for Recovery and Resilience

The devastation of Hurricane Ian brought all Lee County residents together. Business owners provided food to residents in need. Hotel owners opened their doors to shelter those unable to get to safety. Law enforcement and first responder teams worked around the clock to reach the injured. Recovery from this storm will require the same spirit of collaboration across communities, sectors, and government agencies.

Recovery Principals

The following principles will guide Lee County recovery:



Recovery is a Whole Community Activity

Experts and stakeholders across every sector and jurisdiction are needed to contribute and collaborate to ensure Lee County not only bounces back from Hurricane Ian but becomes more resilient. Government can lead where appropriate, but there are many strategic initiatives in this Plan that can be led by other sectors or organizations. This Plan intends to catalyze activity across the entire community.



The County's Existing Resilience Work Should Be Leveraged

Lee County has many organizations, universities, and non-profits working across the region to improve resilience. Finding new ways to expand existing efforts, including through strengthened coordination and by seeking new resources to fund further progress, is key to our strategy. Prioritizing work already identified in other recovery and resilience processes to achieve outcomes more quickly is also a recurrent theme in this Plan.



Build Toward Lee County's Future

Recent disasters demonstrate that recovery and resilience building must support the economy and the region's growth of new industries. The historic investment in recovery work must synergize with efforts to ensure Lee County remains one of the nation's top destinations to live, work, play, and visit.



Honor Community Differences

The diversity of Lee County is key to its history and unique culture. This Plan is designed to enable communities to engage in strategic recovery action in a way that works for their residents. It also respects that communities have different needs and levels of access to opportunity.

It will be necessary for community leaders in all sectors to self-identify the roles their organizations can play in bringing these priorities to life. These strategic Initiatives may allow future recovery planners to seamlessly integrate new projects and programs in alignment with the priorities of this Plan.

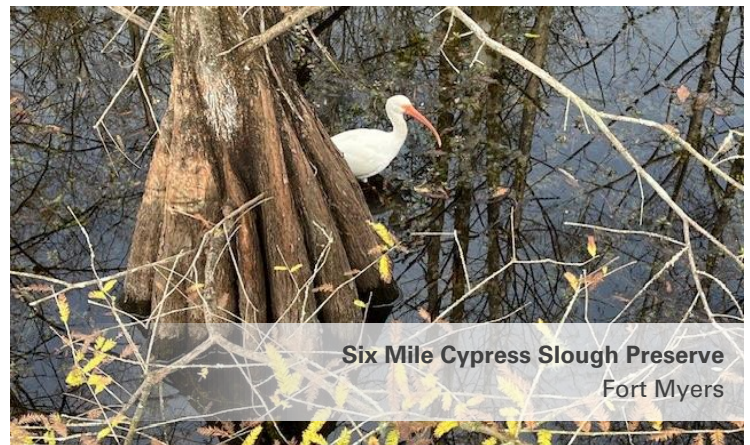
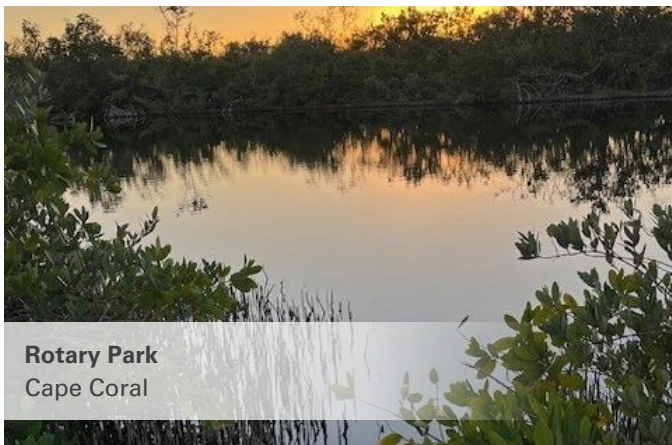
The principles guiding recovery relate to the unique culture and context of our community, which includes the County’s relationship with water and our inherent diversity.

Living With Water

Lee County is a community that experiences water as a vital economic and cultural resource and as an ever-present risk. Located at the point of the Gulf of Mexico and the Caloosahatchee River, the County has over 590 miles of shoreline – with ten County-operated beach parks and multiple beach accesses. It is also home to an active, biodiverse chain of wetlands. Its barrier islands border 804 square miles of land, including 237 miles of inland and coastal waterways. These features draw nearly 4 million tourists in a normal year, contributing to an economic impact of over \$5 billion, an active fishing and shrimping industry, and recreational opportunities considered among the nation’s best.¹

As illustrated in the National Oceanic and Atmospheric Administration Historical Hurricane Tracker, the County is also in a very high-risk hurricane zone; since 1859, 43 hurricanes have been recorded within 60 miles. The shallow coastline and low land elevation of Lee County also make it vulnerable to storm surge. Hurricanes that parallel or approach the coastline can drive large amounts of water across the land, endangering lives and property. While the most significant and devastating impacts of storm surge will typically occur along the barrier islands and coastline, surge impacts can travel miles inland, as well. With much of the County at or below sea level, interior flooding risk threatens large swaths of the region.

Despite higher risks, Lee County has existed as a vibrant community in Southwest Florida for over 130 years. Many residents seek to live and many visitors want to stay near the water. A nationwide survey found that 61 percent of potential second homeowners want their vacation home to be on or near the water, with 42 percent favoring the beach and 19 percent vying for a lakeside location.² The reality of risk makes it critical for Lee County to build back in a resilient fashion that ensures the community can continue to thrive.



¹ Runnells, C. (2023, September 23). After Ian, local leaders are hopeful, say tourism slowly recovering in Fort Myers, Naples. News Press. <https://www.news-press.com/story/news/2023/09/23/southwest-florida-tourism-predictions-fort-myers-naples-sanibel-hurricane-ian/70601243007/>
² Bruche, C. (2023, January 5). Pacasso 2022 second home attitude report. <https://www.pacaso.com/blog/second-home-attitude-report-2022>

Community Diversity

Lee County's population (all jurisdictions) is approaching 800,000 people. The County's demographics are diverse, and the residential neighborhoods and communities throughout the County are vibrant. Lee County is at once a coastal community for residents, a vacation community, a community supporting advanced scientific and environmental research, and the home to an age-diverse population, which includes 213,000 seniors (29 percent).³ Lee County is also home to the state's largest not-for-profit healthcare network. As such, the County's communities are each unique with different features and attributes that contribute greatly to the overall beauty and appeal of Lee County.

The unique regional features define social and economic interconnections between the neighboring jurisdictions and their residents. Examples of community characteristics that distinguish this region amongst others include:



The intense interest in vacation homes and single-family homes has contributed to a regional affordable housing shortage, particularly for working County residents.



Many of the areas in which residents work do not provide nearby affordable housing opportunities, leading to increased commuting and traffic congestion. More specifically, when those who support the arts and culture, tourism/service or natural resource sector sustainment cannot afford to live in the community where they work, then the entire region loses out on a higher quality of life.



Historical and future hurricanes and community shocks pose challenges that are best addressed in collaboration with regional partners.



Tourism is a regional economic driver; if tourism sites do not recover quickly, other supporting businesses can be negatively impacted, reducing prosperity throughout the County area.



If housing and commercial development encroach on coastal wetlands, the entire area may lose out on the natural protective features that can mitigate storm surge.

³ Lee Health. (2023). About us | lee health. <https://www.leehealth.org/about-us>

Because of these regional challenges that cross political boundaries, the region’s leaders identified the need for a collaborative, cross-jurisdictional approach to recovery and resilience. This Plan provides recommendations from the Recovery Task Force – based on community input and technical guidance from the Branches – that Lee County, municipalities within Lee County, special purpose districts, and other stakeholder organizations in government, nonprofit, and private sectors may consider for implementation.



Lynn Hall Destruction
Fort Myers Beach



Post Ian Reconstruction
Fort Myers Beach Elementary



Post-Ian Debris Clean-Up



Ribbon Re-Opening Ceremony
Fort Myers Beach Elementary

The background of the page is a faded photograph of a tropical beach. In the foreground, there are several palm trees with their fronds spread out. In the middle ground, a body of water is visible, with a pier structure consisting of several vertical posts extending into it. In the distance, a low-lying shoreline with some buildings can be seen under a clear sky. The overall tone is light and airy.

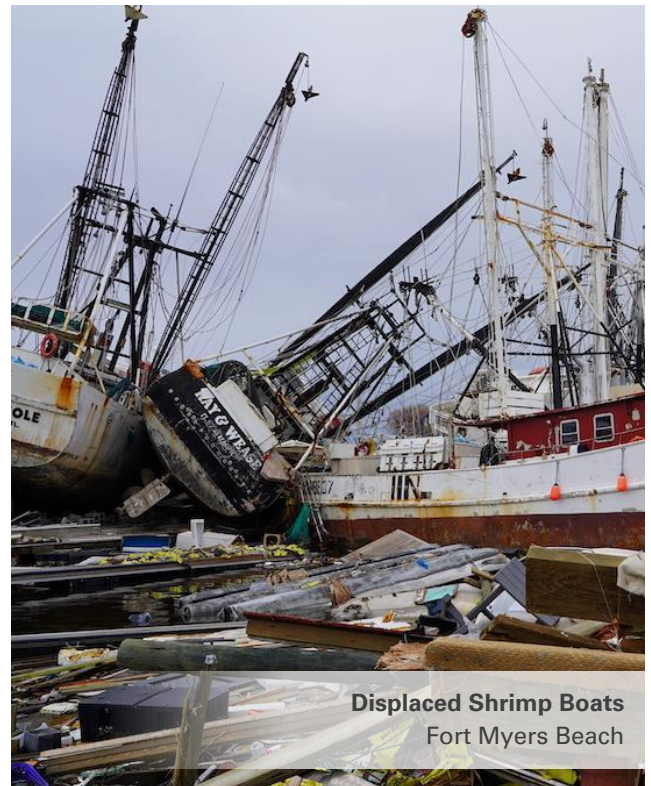
BUILDING THE PLAN

Building the Plan

The development of this Plan was guided by the intention to apply a multi-jurisdictional lens on identifying impactful actions or solutions to community challenges recognized by looking back on both the response to Hurricane Ian and a year in the recovery process. Incorporating community voices was central to this endeavor to best reflect the authentic needs and experiences of Lee County communities. This planning process highlights the collective strength needed to not only recover from historic devastation but also lay the groundwork in forging a resilient future to withstand challenges and uncertainty posed by future incidents.

Hurricane Ian Impact

On September 28, 2022, Hurricane Ian made landfall in Southwest Florida as an extremely dangerous Category 4 storm. This historic event served as a powerful reminder of nature's overwhelming force and the need for a high level of emergency preparedness and resilience across Lee County. Residents were displaced from their homes, healthcare facilities and services were disrupted, infrastructure systems failed, natural and cultural resources sustained significant damages, and the overall economic impact is extreme and ongoing. At landfall, Hurricane Ian was the ninth tropical cyclone on record to directly hit Lee County and ranks fourth in strongest sustained windspeeds at landfall across all storms in the State of Florida, tying with Hurricane Charley in 2004 and a Florida Keys Hurricane in 1919. As storms increase in frequency and intensity, leaders in the Lee County region are looking forward to preparing for the greatest risks possible rather than only focusing on historical trends.



The Southwest Florida Region is familiar with hurricanes, but Hurricane Ian caused the most devastation that the area has experienced. Lee County constitutes a unique geography with hundreds of miles of waterways and surrounding islands home to many residents but only accessible by bridges or boat vessels. The County considers approximately 50 miles of beachline as its most valuable economic asset, highlighting the potential for cascading community effects and multi-sector susceptibility to impacts. The storm surge from Hurricane Ian reached approximately 15 feet on some of the barrier islands and spread inland at varying heights. This storm approached with sustained windspeeds reaching 150 miles per hour. Storm effects resounded throughout the region with varying jurisdictional impacts. Some communities were disproportionately affected due to storm characteristics, geographic makeup, and pre-storm economic and social conditions. The extensive scale of destruction necessitated regional-level coordination and strategic planning for response and recovery efforts.

Category 4 Storm



15 ft

Storm Surge

161 mph winds

and the fourth strongest (windspeed) storm to make landfall in the State of Florida



12 million

Cubic Yards of Debris

9th

Tropical Cyclone on Record to Directly Hit Lee County



451,869 People
Ordered to Evacuate

15

General Population
Shelters Opened



1

Special Medical Needs
Shelter Opened



5,954

People Sheltered



240

Pets sheltered



\$122 Billion
in Damages

Homes Destroyed:
5,076

Businesses Destroyed:
284

Businesses Majorly Damaged:
910

Businesses Minorly Damaged:
1,851



Municipal Experiences

Lee County includes six municipalities, which house more than half of the County's population, with the remaining residents residing in unincorporated areas. Each jurisdiction experienced Hurricane Ian differently and had its own set of unique challenges due to varying geographies, demographics, social conditions, and infrastructure. The idiosyncrasies of each jurisdiction are part of the charm of each destination, making the recovery of each local government unique.

City of Bonita Springs

Population: 55,000



The City of Bonita Springs experienced a variety of impacts from Hurricane Ian. Along Bonita Beach, significant coastal storm surge devastated residential and tourism areas. Further inland, the area along the Imperial River experienced significant flooding. The City's parks, public facilities, and downtown area that are frequented by residents and visitors were impacted by winds and flooding. The recovery of businesses, arts, and cultural sites in Bonita Springs beaches and in downtown areas highlights the importance of cross sector planning to create a more resilient community.

City of Sanibel

Population: 6,000

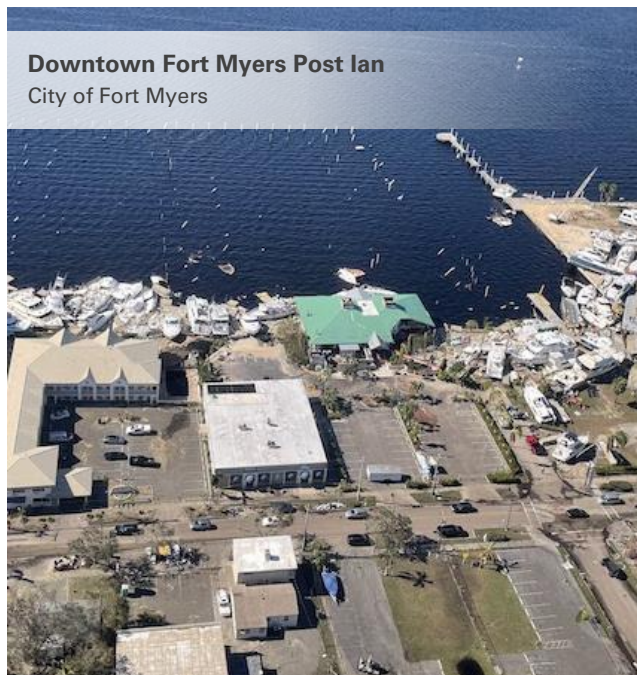
The City of Sanibel is a sanctuary barrier island that is renowned for its protected natural areas and pristine beach. Sanibel was among the most severe impacted jurisdictions in Lee County experiencing up to 15ft of storm surge that inundated the island causing wide-spread damage and breached the 3-mile-long Sanibel Causeway - the critical link to the mainland of Lee County - in 7 places. The beaches of Sanibel were left scoured by the ebb-flow of the storm surge as it receded, damaging the dunes and beach walkovers and limiting access. Sanibel's economy relies heavily on tourism and seasonal residents who stay at the island's many resorts and rental properties. The repair and reconstruction of homes, condominiums, resorts, and rental properties is a critical component of restoring the region's tourism economy.



Sanibel Lighthouse Post Ian
Lighthouse Keeper Cottages Destroyed
Lighthouse Beach

City of Fort Myers

Population: 98,000



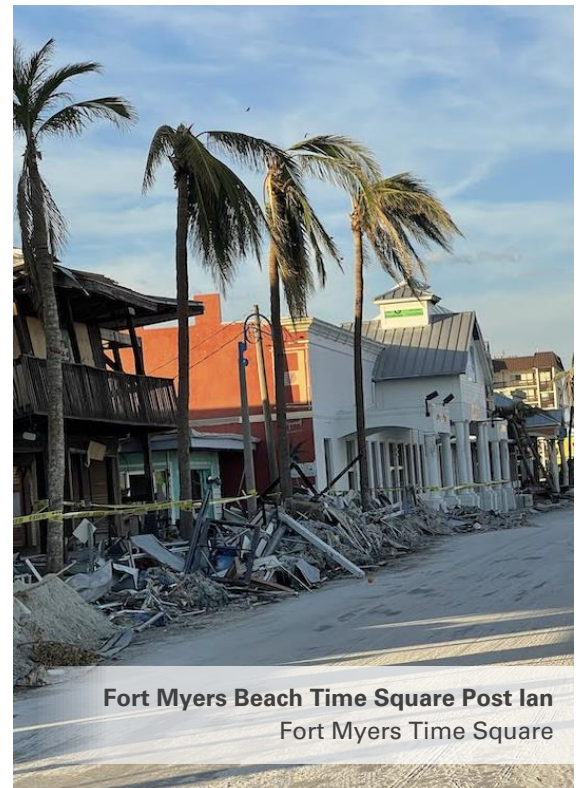
Downtown Fort Myers Post Ian
City of Fort Myers

The oldest incorporated city in Lee County, the City of Fort Myers experienced flooding in the historic downtown area along the Caloosahatchee River, despite being located miles inland. Downtown Fort Myers experienced up to 6 feet of storm surge flooding, contributing to approximately \$700 million in damages across City businesses, homes, and cars. The historical and cultural sites that are large attractions, as well as the economic centers located in the City of Fort Myers, bounced back quickly, driving the economic recovery of the region while the coastal tourist destinations recover. Fort Myers economic recovery does not only consist of rebuilding damaged structures; economic leaders describe plans to include new businesses, access to parking, hospitality and more within the municipality.

Town of Fort Myers Beach

Population: 5,600

The Town of Fort Myers Beach, a vibrant beach destination and community known for its “Small Town Vibe,” was among the most severely impacted jurisdictions of Lee County along with the coastal flood zone areas of Sanibel, Cape Coral, Pine Island, and unincorporated Lee County. The Town experienced upwards of 15 ft levels of above ground storm surge, which dramatically changed the island’s landscape. Hurricane Ian washed away historic landmarks, businesses, and residences, including Times Square and other areas heavily frequented by locals and visitors alike, with nearly every structure on the island severely impacted in some way. The culture of the resilient and determined Town as an accessible and affordable place to experience paradise remains through the rebuild. Median home prices on Fort Myers Beach are approximately \$300,000 less than nearby coastal islands, creating a reputation of affordability and value for a visitor’s travel dollar. Fort Myers Beach is a significant tourist destination within Lee County with over 1.8 million annual visitors and a high number of seasonal residents. Repairing or



Fort Myers Beach Time Square Post Ian
Fort Myers Time Square

rebuilding hotels, vacation rentals, homes, and attractions on the beach will take time, with implications for the restoration of economic activity that benefits the Town and the entire region.

City of Cape Coral

Population: 213,000



The City of Cape Coral is the largest municipality by both land area and population in Lee County. Cape Coral is a highly residential area with tens of thousands of community members driving over the bridge into Fort Myers for work. This City is also one of the fastest growing cities in Florida with the population growing at an annual rate of about 2.52 percent. Hurricane Ian's storm surge severely impacted the neighborhoods in the southern portion of Cape Coral, including the historic Cape Coral Yacht Club and pier. With approximately 400 miles of canals, flooding and the impacts from winds were felt throughout the city. Through Plan development and implementation, Stakeholders were able to identify and explore solutions to the City's recovery priorities.

Village of Estero

Population: 37,500

The newest municipality in Lee County, The Village of Estero, was incorporated in 2014. During Hurricane Ian, the western neighborhoods of the city along Estero Bay and those along the Estero River were severely impacted. Residential areas saw storm surge up to eight feet, inundating homes, and vehicles. The recovery in the Village sets the stage for continued growth in this young municipality.



Unincorporated Lee County

Population: 388,000

The unincorporated areas experienced a variety of impacts depending on the specific location. Greater Pine Island, San Carlos Island, and Iona are examples of some of the coastal communities in Unincorporated Lee County that experienced catastrophic storm surge due to Hurricane Ian. The Matlacha Pass Bridge, which connects Pine Island and Matlacha to mainland Lee County, was washed away due to storm surge, severing the single roadway that connects those approximately 8,600 residents. While large inland areas of unincorporated Lee County such as Lehigh Acres did not sustain major damage to infrastructure and services

compared to coastal areas, the resilience of the region to future hazards depends on more than just the ability of coastal regions to prepare for the next storm.



Matlacha Pass Bridge Post Ian
Unincorporated Lee County

Recovery Planning Process

As part of the region’s recovery from Ian, the Lee Board of County Commissioners (BOCC) appointed a Recovery Task Force (RTF) comprising local and regional leadership tasked with identifying opportunities to adopt innovative approaches in support of community resilience. The RTF’s primary objective was to bring the impacted communities together and develop this ResilientLee Recovery and Resilience Plan (Plan) to outline and guide regional recovery.

Recovery Task Force

The RTF was established in February 2023 to serve as an advisory committee to the BOCC by informing the strategic response and recovery operations of Hurricane Ian. RTF Members include municipal mayors, city councilmembers, and public agency officials, including the school district, the Sheriff’s Office, and fire departments, to represent interests of the whole community. This Task Force was established in accordance with existing Lee County recovery plans and processes and the Federal Emergency Management Agency’s (FEMA) National Disaster Recovery Framework (NDRF). RTF members relied upon the valuable input from eight recovery Branches, also aligning with the NDRF, to incorporate local and sector-specific expertise within the Plan development process.

Branches

To develop a collaborative, comprehensive, and feasible Plan, the RTF appointed relevant public and private sector stakeholders to eight Branches: Planning & Capacity, Economic Recovery, Education & Workforce, Housing, Health & Social Services, Infrastructure, Natural Resources, and Cultural Resources. During the development of this Plan, Branches met approximately monthly to discuss community and regional recovery needs and to identify opportunities to recommend smart, innovative solutions that address regional gaps in support of increased resilience. Jurisdictional government agencies, private business owners, higher education academic institutions, non-profit organizations, and other regional entities provided input throughout the development of this Plan.



PLANNING & CAPACITY

The Planning and Capacity Branch considered how the region can gain the information needed to inform where people live, work, and play while strengthening the community to be healthy, resilient, and safe for residents and businesses.



ECONOMIC RECOVERY

The focus of the Economic Recovery Branch was to coordinate with the County's public, private, and non-profit efforts to develop a long-term vision for our local economy.



EDUCATION & WORKFORCE

The Education and Workforce Branch helped ensure that educational opportunities serve the current Southwest Florida economy but are also designed to anticipate changes as a new economy emerges.



HEALTH & SOCIAL SERVICES

The Health and Social Services Branch coordinated to help ensure that the development and delivery of healthcare and social services enables the community to be resilient.



INFRASTRUCTURE

The Infrastructure Branch worked to restore and revitalize the County's critical infrastructure to support a viable, sustainable community and improve resilience to and protection from future hazards and threats.



HOUSING

The focus of the Housing Branch was on providing attainable, resilient housing solutions for all residents and building methods to support the needs of the community and workforce.



NATURAL RESOURCES

The Natural Resources Branch focused on the protection, recovery and stewardship of the area's natural resources and environment.



CULTURAL RESOURCES

The Cultural Resources Branch focused on actions that support and secure the role arts and culture play in our communities and how they help to shape our identity.



Community Input

Extensive community outreach was an integral component of developing the ResilientLee Recovery and Resilience Plan in pursuit of collaboration and transparency. Community members provided input on recovery approach and Initiatives through public Branch and RTF meetings, Town Halls, On the Table conversations, and through multiple online community feedback surveys, including one to collect feedback on the full, near final text of the Initiatives. Together, regional stakeholders and community members have successfully articulated strategic recovery objectives for the County and municipalities to review and implement in alignment with the goals and resources of their respective jurisdictions.



1 Recovery Task Force

Made up of **13 Regional Leaders**

7 Total Jurisdictions

Made up of **Municipalities** and **Unincorporated Lee County**

Branches:

8

Total Branches of **Regional Experts**



123

Branch Members



Town Halls:

17

Total Town Halls



15

In Person



2

Virtual



1,026

Total Attendees



Workshops:

4

Workshops



14

Sessions



72

Panelists



On The Table Event:

1

Workshop



1,033

Surveys Collected



Community Surveys:

5,171

Instances of Engagement for the **Initial Survey**



684

Instances of Engagement for the **Final Survey**



TIMELINE OF RECOVERY PLAN DEVELOPMENT

FEBRUARY 2023

RTF Establishment

- The Recovery Task Force was established to advise the Lee Board of County Commissioners and develop the ResilientLee Recovery and Resilience Plan.

APRIL 2023

Community Priorities Survey

- More than 5,000 residents responded to a community survey about recovery priorities.

Branch Priority Recommendations

- Branches determined recovery priorities, informed by the community survey, in their respective areas of focus for consideration throughout Plan development. The RTF approved the recovery priorities.

JUNE 2023

Municipal Project Submissions

- Municipalities submitted a list of in process and planned recovery projects.

Recovery Solutions Workshops

- Workshops brought local, regional, and national subject matter experts together to align themes and objectives of multiple Branches and provide technical expertise on potential solutions or Initiatives that Branches were considering.

NOVEMBER 2023

Community Initiative Review

- Final Initiatives were socialized with the public to provide visibility on regional objectives and an opportunity for feedback.

MARCH 2024

BOCC Vote

- After a period for municipal council review of the final Plan, the Plan was presented to the Lee Board of County Commissioners in March 2024.

MARCH 2023

Branch Appointments

- Eight Branches begin, comprised of public and private sector stakeholders to collaborate and provide subject matter expertise during the Plan development process.

On the Table (OTT) SWFL Event

- This one-day community wide forum collected survey responses from over 1,000 Southwest Floridians participating in dialogues on the top issues of concern in Lee County.

APRIL – MAY 2023

Community Town Halls

- Lee County hosted 17 Town Hall events to further involve community members in the planning process. Over 600 people attended to review Branch priorities and add context to community challenges.

JULY – NOVEMBER 2023

Initiative Development

- Branch members compiled community feedback, municipal projects, and applied their expertise to build strategic Initiatives. Branch and RTF members as well as municipal and County stakeholders thoroughly reviewed and collaboratively refined the draft Initiatives.

DECEMBER 2023 – FEBRUARY 2024

Plan Finalization

- The Plan was updated per community review and finalized to reflect regional aspirations.

Initiative Development

Each Initiative within this Plan was thoughtfully crafted to reflect solutions that address regional challenges that existed both before and after Hurricane Ian impacted Lee County.

The Initiative development process began with Branch members reviewing residents' input about community obstacles and leveraging that feedback to frame initial Branch-specific priorities to guide the overall development of the Plan. A crucial step to this process included presenting the initial priorities back to the community to assess support levels and allow for necessary refinements based on feedback. Community members actively contributed by sharing specific instances of difficulty and insights that further shaped needed solutions.

INITIATIVE DEVELOPMENT PROCESS



To ensure a comprehensive regional approach, municipalities submitted lists of proposed, planned, and ongoing projects within their respective jurisdictions. These projects underwent thorough analysis to align them with the initial priorities. Branches then developed recovery Initiatives in response to community input, municipal projects, and the RTF-approved Branch priorities. Draft Branch Initiatives were revised through an iterative process to build consensus between Branch members, RTF members, municipal leaders, and County stakeholders with multiple rounds of review and refinement. Final drafts of the Initiatives were shared with the community for conclusive feedback before proceeding to the Board of County Commissioners for a vote on adoption.

Funding Alignment and Pursuit

Hurricane Ian was responsible for more than \$112 billion in damage, making it the costliest hurricane in Florida's history and the third costliest in our nation's history.⁴ To increase educational awareness among Lee County stakeholders, the Plan's Initiatives detail federal, state, private, and philanthropic grant programs that could provide investments aligned with recovery and resiliency objectives. The collaboration by Lee County stakeholders can enable a funding strategy that pursues opportunities to maximize the impact of resources through regional approaches. The following sections provide context on the significance of available disaster-focused programs, other available funding programs, and the value in regionalism.

While disaster-focused resources exist to support recovery, they do not (on their own) provide adequate funding to source the entirety of Initiatives included in the Plan. The identification and pursuit of federal, state, and philanthropic funding to augment disaster-focused programs is critically important.

Disaster Relief Funding

After a presidentially declared disaster like Hurricane Ian, The Stafford Act provides Federal Disaster Relief Funding to eligible local, state, tribal, and territorial governments when a disaster surpasses their ability to adequately respond. In preparation and response to Hurricane Ian, federal assistance was directed to Lee County through the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) in the form of Public Assistance (PA) to help cover the cost of debris removal, life-saving emergency protective measures, and restoring public infrastructure. In addition to PA, due to the level of damage, FEMA also granted Lee County support through the Individual Assistance (IA) Program and the Hazard Mitigation Grant Program (HMGP). Separately, the U.S. Small Business Administration (SBA) offered low-interest long-term disaster recovery loans to impacted residents and businesses.

While FEMA and SBA funding assistance is typically released after a presidentially declared disaster, the President may begin the flow of federal resources to an affected community prior to a likely high-severity disaster to enhance immediate response and recovery. This was the experience of Lee County, which was approved to receive federal resources beginning on September 23, 2022, prior to Hurricane Ian's landfall.

⁴ Bucci, Lisa. (2023, April). National Hurricane Center tropical cyclone report hurricane ian AL092022_Ian, National Ocean and Atmospheric Administration. Page 13. https://www.nhc.noaa.gov/data/tcr/AL092022_Ian.pdf

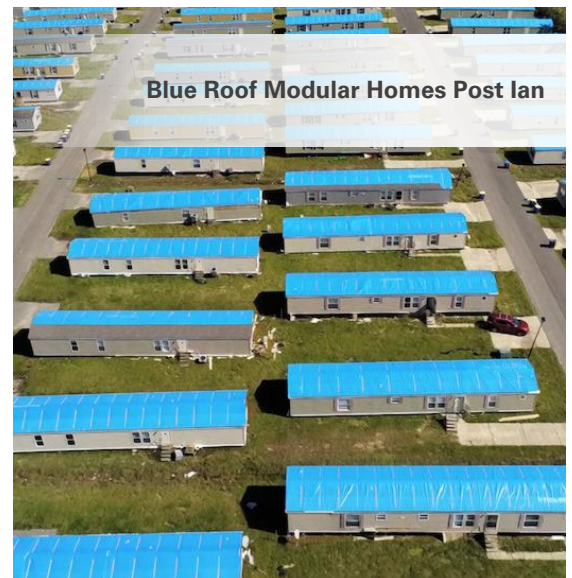
The U.S. Congress has discretion to appropriate funding to federal agencies to support impacted communities following a catastrophic event. A traditional avenue of funding is the U.S. Department of Housing and Urban Development’s (HUD) Community Development Block Grant-Disaster Recovery (CDBG-DR). The funding is intended to rebuild affected areas and provide crucial seed money to start the recovery process.

Following appropriation by the U.S. Congress, on March 15, 2023, HUD announced that Lee County would receive a direct allocation of \$1.1 billion in CDBG-DR funding. HUD requires CDBG-DR recipients to submit an Action Plan that indicates the intended programmatic uses of the funding for approval prior to receipt. Lee County submitted a draft Action Plan to HUD in September 2023, and upon its approval, may begin to utilize this resource.

Federal Grant Programs

While FEMA and the SBA are the primary organizations that provide immediate resources to jurisdictions following an emergency, other federal agencies offer grant programs to support ongoing disaster recovery, mitigation, and resiliency needs. Specific federal agencies and grant programs that align with objectives are detailed in the Plan’s Initiatives.

Recent federal legislation has resulted in new and unique programs through the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA). The IIJA and IRA offer \$1.2 trillion and \$370 billion in funding, respectively, over their lifetimes, and invest in the nation’s infrastructure, sustainability, energy security, and resiliency programs. The IIJA and IRA represent potential near and mid-term resources for Lee County’s Hurricane Ian recovery as most programs included are funded through at least fiscal year (FY) 2026. A detailed list identifying thematic overlap between Lee County’s recovery Initiatives and IIJA and IRA programs is included in [Appendix A](#).



The IIJA and IRA establish new requirements for federal grant recipients including the Justice40 Initiative, a guideline that directs 40% of available funding to disadvantaged communities that are marginalized, underserved, and/or overburdened by pollution. Other priorities within the IIJA and IRA are climate change,

sustainability, resiliency, renewable energy, and an emphasis on grant applications that benefit more than one jurisdiction or entity through a regional approach.

While the IIJA and IRA are not disaster focused, they offer significant potential resources for Lee County to recover from Hurricane Ian and build resiliency to future disasters. Many grant programs in the IIJA and IRA are newly established and the work of federal agencies to confirm grant program scope and eligibility requirements is ongoing. In addition to becoming familiar with the intent of IIJA and IRA grant programs included in the Plan's Initiatives, Lee County, local jurisdictions, private and not-for-profit organizations should closely review eligibility requirements and application timelines.

Regional Approach

A priority for pursuing federal and state grant funding is maximizing impact while minimizing operational and administrative costs. Regional approaches to grant program pursuit support this effort. The volume of documentation required for response and recovery reimbursement, as well as the value of the potential reimbursements, highlights the need to be methodic, meticulous, and thorough in program management and grants administration. The scale of the recovery reimbursement process is exponentially greater than blue sky management and requires increasing capacity and resources. Coordinated administration of major funding sources is essential to effective and timely distribution of recovery funds from federal, state, and local governmental, private, and nonprofit sources.

Federal and state agencies place value on collaboration, partnership, and regional coordination when considering applications. Moreover, regional approaches prevent local jurisdictions from competing against each other for the same sources of funding by working in unison to achieve the goals outlined by the Plan's Initiatives.

It is important to identify specific funding needs, mechanisms, and organizational structures. When contemplating various funding applications, the region will articulate priorities and understand eligibility requirements. It is necessary to determine the appropriateness and feasibility of each grant program, allowing for efficient and effective allocation of resources during the long-term recovery process and maximizing federal funding opportunities.



RECOVERY INITIATIVES

Initiatives Overview




The Initiatives are strategic approaches to improve long-term recovery and resilience following the devastating impact of Hurricane Ian. Initiatives are not intended to address specific projects or programs but to represent holistic and meaningful actions for the region. Each Initiative was informed by community input, developed by the Branches, and refined through RTF, municipal, County, and further community feedback (see [Recovery Planning Process](#)).






BRANCH IDENTIFICATION AND INITIATIVE ABBREVIATION KEY






 PLANNING & CAPACITY PC-000	 ECONOMIC RECOVERY ER-000	 EDUCATION & WORKFORCE EW-000	 HEALTH & SOCIAL SERVICES HS-000
 INFRASTRUCTURE IF-000	 HOUSING HG-000	 NATURAL RESOURCES NR-000	 CULTURAL RESOURCES CR-000





Many of the Initiatives mention related topics that include elements from the expertise of multiple Branches and the County’s strategic vision for recovery. Some of the connections are clear direct linkages while others may be more nuanced. The reference table below describes the interdisciplinary linkages designed to achieve regional benefits.






REFERENCE TABLE OF RELATED INITIATIVES






Initiative	Related Initiatives
PC-001 Planning Regional Resilience 	Applies to All
PC-002 Strengthening Emergency Logistical Resources 	IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities IF-006 Rebuilding Resilient Communications Infrastructure IF-007 Augmenting Resilient Energy Infrastructure ER-003 Building Continuity of Operations for Regional Businesses HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-003 Creating a Mobile Health Clinic System HS-004 Establishing a Community Resilience Hubs Network
PC-003 Increasing Cost Recovery Capacity 	PC-004 Supporting Regional Debris Management IF-001 Diversify and Strengthen the Region's Emergency Shelter Network




Initiative	Related Initiatives
<p>PC-004 Supporting Regional Disaster Debris Management</p> 	<p>PC-003 Increasing Cost Recovery Capacity IF-006 Rebuilding Resilient Communications Infrastructure IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-002 Flood and Stormwater Management NR-003 Improving Water Quality Utilizing Green Infrastructure NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration</p>
<p>IF-001 Diversify and Strengthen the Region's Emergency Shelter Network</p> 	<p>PC-003 Increasing Cost Recovery Capacity IF-002 Improving Evacuation Preparedness IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities IF-010 Building Back More Resilient Working Waterfronts HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-004 Establishing a Community Resilience Hubs Network</p>
<p>IF-002 Improving Evacuation Preparedness</p> 	<p>IF-001 Diversify and Strengthen the Region's Emergency Shelter Network IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options IF-010 Building Back More Resilient Working Waterfronts HS-004 Establishing a Community Resilience Hubs Network</p>
<p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options</p> 	<p>IF-002 Improving Evacuation Preparedness IF-007 Augmenting Resilient Energy Infrastructure IF-010 Building Back More Resilient Working Waterfronts NR-006 Reviving Public Recreation HG-001 Supporting Regional Housing Coordination HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities ER-003 Building Continuity of Operations for Regional Businesses ER-004 Supporting a Diverse and Resilient Economy EW-001 Accessing Early Learning EW-002 Expanding Out of School Programming CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector CR-003 Advancing Public Art While Rebuilding</p>
<p>IF-004 Hardening Critical Facilities and Systems</p> 	<p>PC-002 Strengthening Emergency Logistical Resources IF-001 Diversify and Strengthen the Region's Emergency Shelter Network IF-005 Fortifying Essential Services and Facilities IF-006 Rebuilding Resilient Communications Infrastructure IF-007 Augmenting Resilient Energy Infrastructure IF-008 Improving Potable Water Delivery IF-009 Improving Resilient Wastewater Infrastructure NR-002 Flood and Stormwater Management ER-003 Building Continuity of Operations for Regional Businesses HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-003 Creating a Mobile Health Clinic System HS-004 Establishing a Community Resilience Hubs Network</p>

Initiative	Related Initiatives
<p>IF-005 Fortifying Essential Services and Facilities</p> 	<p>PC-002 Strengthening Emergency Logistical Resources IF-001 Diversify and Strengthen the Region's Emergency Shelter Network IF-004 Hardening Critical Facilities and Systems IF-006 Rebuilding Resilient Communications Infrastructure IF-007 Augmenting Resilient Energy Infrastructure IF-008 Improving Potable Water Delivery IF-009 Improving Resilient Wastewater Infrastructure NR-002 Flood and Stormwater Management ER-003 Building Continuity of Operations for Regional Businesses ER-004 Supporting a Diverse and Resilient Economy HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-003 Creating a Mobile Health Clinic System HS-004 Establishing a Community Resilience Hubs Network</p>
<p>IF-006 Rebuilding Resilient Communications Infrastructure</p> 	<p>PC-002 Strengthening Emergency Logistical Resources PC-004 Supporting Regional Disaster Debris Management IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities HG-001 Supporting Regional Housing Coordination HG-007 Exploring Mixed-Use Development Opportunities ER-003 Building Continuity of Operations for Regional Businesses HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-004 Establishing a Community Resilience Hubs Network</p>
<p>IF-007 Augmenting Resilient Energy Infrastructure</p> 	<p>PC-002 Strengthening Emergency Logistical Resources IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options HG-001 Supporting Regional Housing Coordination HG-006 Promoting Housing Development Programs ER-003 Building Continuity of Operations for Regional Businesses HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services</p>
<p>IF-008 Improving Potable Water Delivery</p> 	<p>IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities NR-003 Improving Water Quality Utilizing Green Infrastructure HG-001 Supporting Regional Housing Coordination HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities ER-003 Building Continuity of Operations for Regional Businesses HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services</p>
<p>IF-009 Improving Resilient Wastewater Infrastructure</p> 	<p>IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities HG-001 Supporting Regional Housing Coordination HG-002 Coordinating Housing Programs and Services and Enhancing Outreach HG-003 Expanding Housing Financing and Legal Service Programs HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities</p>





Initiative	Related Initiatives
	ER-003 Building Continuity of Operations for Regional Businesses HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
IF-010 Building Back More Resilient Working Waterfronts 	PC-004 Supporting Regional Disaster Debris Management IF-001 Diversify and Strengthen the Region's Emergency Shelter Network IF-002 Improving Evacuation Preparedness IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options NR-001 Protecting Coastal and Natural Buffers NR-003 Improving Water Quality Utilizing Green Infrastructure NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-005 Coordinating Regional Land Acquisition and Management NR-006 Reviving Public Recreation HG-004 Identifying Buyout Opportunities HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities ER-004 Supporting a Diverse and Resilient Economy
NR-001 Protecting Coastal and Natural Buffers 	PC-004 Supporting Regional Disaster Debris Management IF-010 Building Back More Resilient Working Waterfronts NR-002 Flood and Stormwater Management NR-003 Improving Water Quality Utilizing Green Infrastructure NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-005 Coordinating Regional Land Acquisition and Management NR-006 Reviving Public Recreation HG-004 Identifying Buyout Opportunities HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities
NR-002 Flood and Stormwater Management 	PC-004 Supporting Regional Disaster Debris Management IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities NR-001 Protecting Coastal and Natural Buffers NR-003 Improving Water Quality Utilizing Green Infrastructure NR-005 Coordinating Regional Land Acquisition and Management HG-001 Supporting Regional Housing Coordination HG-004 Identifying Buyout Opportunities HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities
NR-003 Improving Water Quality Utilizing Green Infrastructure 	PC-004 Supporting Regional Disaster Debris Management IF-008 Improving Potable Water Delivery IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-002 Flood and Stormwater Management NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-005 Coordinating Regional Land Acquisition and Management HG-004 Identifying Buyout Opportunities

Initiative	Related Initiatives
<p>NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration</p> 	<p>PC-004 Supporting Regional Disaster Debris Management IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-003 Improving Water Quality Utilizing Green Infrastructure NR-005 Coordinating Regional Land Acquisition and Management NR-006 Reviving Public Recreation HG-004 Identifying Buyout Opportunities HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities</p>
<p>NR-005 Coordinating Regional Land Acquisition and Management</p> 	<p>IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-002 Flood and Stormwater Management NR-003 Improving Water Quality Utilizing Green Infrastructure NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-006 Reviving Public Recreation HG-004 Identifying Buyout Opportunities HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities</p>
<p>NR-006 Reviving Public Recreation</p> 	<p>IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-005 Coordinating Regional Land Acquisition and Management NR-007 Supporting Natural Resources Community Outreach and Education HG-001 Supporting Regional Housing Coordination HG-004 Identifying Buyout Opportunities HG-005 Supporting Housing Repair- Reconstruction Programs</p>
<p>NR-007 Supporting Natural Resources Community Outreach and Education</p> 	<p>NR-006 Reviving Public Recreation HG-004 Identifying Buyout Opportunities HG-007 Exploring Mixed-Use Development Opportunities CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector CR-003 Advancing Public Art While Rebuilding</p>
<p>HG-001 Supporting Regional Housing Coordination</p> 	<p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options IF-006 Rebuilding Resilient Communications Infrastructure IF-007 Augmenting Resilient Energy Infrastructure IF-008 Improving Potable Water Delivery IF-009 Improving Resilient Wastewater Infrastructure NR-002 Flood and Stormwater Management NR-006 Reviving Public Recreation HG-002 Coordinating Housing Programs and Services and Enhancing Outreach HG-003 Expanding Housing Financing and Legal Service Programs HG-004 Identifying Buyout Opportunities HG-005 Supporting Housing Repair- Reconstruction Programs HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities ER -001 Affordable and Adequate Insurance</p>

Initiative	Related Initiatives
<p>HG-002 Coordinating Housing Programs and Services and Enhancing Outreach</p> 	<p>IF-009 Improving Resilient Wastewater Infrastructure NR-007 Supporting Natural Resources Community Outreach and Education HG-001 Supporting Regional Housing Coordination HG-003 Expanding Housing Financing and Legal Service Programs HG-004 Identifying Buyout Opportunities HG-005 Supporting Housing Repair- Reconstruction Programs HG-006 Promoting Housing Development Programs ER -001 Affordable and Adequate Insurance EW-004 Increasing Mental Health Provider Capacity</p>
<p>HG-003 Expanding Housing Financing and Legal Service Programs</p> 	<p>IF-009 Improving Resilient Wastewater Infrastructure HG-001 Supporting Regional Housing Coordination HG-002 Coordinating Housing Programs and Services and Enhancing Outreach HG-005 Supporting Housing Repair- Reconstruction Programs HG-006 Promoting Housing Development Programs ER -001 Affordable and Adequate Insurance EW-004 Increasing Mental Health Provider Capacity</p>
<p>HG-004 Identifying Buyout Opportunities</p> 	<p>IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-002 Flood and Stormwater Management NR-003 Improving Water Quality Utilizing Green Infrastructure NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-005 Coordinating Regional Land Acquisition and Management NR-006 Reviving Public Recreation NR-007 Supporting Natural Resources Community Outreach and Education HG-001 Supporting Regional Housing Coordination HG-002 Coordinating Housing Programs and Services and Enhancing Outreach</p>
<p>HG-005 Supporting Housing Repair- Reconstruction Programs</p> 	<p>NR-006 Reviving Public Recreation HG-001 Supporting Regional Housing Coordination HG-002 Coordinating Housing Programs and Services and Enhancing Outreach HG-003 Expanding Housing Financing and Legal Service Programs ER -001 Affordable and Adequate Insurance</p>
<p>HG-006 Promoting Housing Development Programs</p> 	<p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options IF-007 Augmenting Resilient Energy Infrastructure IF-008 Improving Potable Water Delivery IF-009 Improving Resilient Wastewater Infrastructure IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-002 Flood and Stormwater Management NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-005 Coordinating Regional Land Acquisition and Management HG-001 Supporting Regional Housing Coordination HG-002 Coordinating Housing Programs and Services and Enhancing Outreach HG-003 Expanding Housing Financing and Legal Service Programs HG-007 Exploring Mixed-Use Development Opportunities ER -001 Affordable and Adequate Insurance ER-004 Supporting a Diverse and Resilient Economy EW-001 Accessing Early Learning EW-002 Expanding Out of School Programming</p>

Initiative	Related Initiatives
<p>HG-007 Exploring Mixed-Use Development Opportunities</p> 	<p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options IF-006 Rebuilding Resilient Communications Infrastructure IF-008 Improving Potable Water Delivery IF-009 Improving Resilient Wastewater Infrastructure IF-010 Building Back More Resilient Working Waterfronts NR-001 Protecting Coastal and Natural Buffers NR-002 Flood and Stormwater Management NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration NR-005 Coordinating Regional Land Acquisition and Management NR-007 Supporting Natural Resources Community Outreach and Education HG-001 Supporting Regional Housing Coordination HG-006 Promoting Housing Development Programs ER -001 Affordable and Adequate Insurance ER-004 Supporting a Diverse and Resilient Economy CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector</p>
<p>ER -001 Affordable and Adequate Insurance</p> 	<p>HG-001 Supporting Regional Housing Coordination HG-002 Coordinating Housing Programs and Services and Enhancing Outreach HG-003 Expanding Housing Financing and Legal Service Programs HG-005 Supporting Housing Repair- Reconstruction Programs HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities ER-003 Building Continuity of Operations for Regional Businesses</p>
<p>ER-002 Sourcing Disaster Focused Loans and Grants</p> 	<p>HG-001 Supporting Regional Housing Coordination HG-002 Coordinating Housing Programs and Services and Enhancing Outreach HG-003 Expanding Housing Financing and Legal Service Programs HG-005 Supporting Housing Repair- Reconstruction Programs HG-006 Promoting Housing Development Programs HG-007 Exploring Mixed-Use Development Opportunities ER-003 Building Continuity of Operations for Regional Businesses</p>
<p>ER-003 Building Continuity of Operations for Regional Businesses</p> 	<p>PC-002 Strengthening Emergency Logistical Resources IF-001 Diversify and Strengthen the Region's Emergency Shelter Network IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities IF-006 Rebuilding Resilient Communications Infrastructure IF-007 Augmenting Resilient Energy Infrastructure IF-008 Improving Potable Water Delivery IF-009 Improving Resilient Wastewater Infrastructure ER -001 Affordable and Adequate Insurance ER-004 Supporting a Diverse and Resilient Economy EW-003 Expanding Lifelong Learning to Support the Workforce HS-001 Expanding Behavioral Healthcare Facilities and Resources HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-003 Creating a Mobile Health Clinic System</p>

Initiative	Related Initiatives
<p>ER-004 Supporting a Diverse and Resilient Economy</p> 	<p>CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector</p> <p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options</p> <p>IF-010 Building Back More Resilient Working Waterfronts</p> <p>HG-006 Promoting Housing Development Programs</p> <p>HG-007 Exploring Mixed-Use Development Opportunities</p> <p>ER-003 Building Continuity of Operations for Regional Businesses</p> <p>EW-002 Expanding Out of School Programming</p> <p>EW-003 Expanding Lifelong Learning to Support the Workforce</p> <p>EW-004 Increasing Mental Health Provider Capacity</p> <p>CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector</p> <p>CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector</p>
<p>EW-001 Accessing Early Learning</p> 	<p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options</p> <p>HG-006 Promoting Housing Development Programs</p> <p>EW-003 Expanding Lifelong Learning to Support the Workforce</p> <p>EW-004 Increasing Mental Health Provider Capacity</p> <p>HS-003 Creating a Mobile Health Clinic System</p> <p>HS-004 Establishing a Community Resilience Hubs Network</p>
<p>EW-002 Expanding Out of School Programming</p> 	<p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options</p> <p>HG-006 Promoting Housing Development Programs</p> <p>ER-004 Supporting a Diverse and Resilient Economy</p> <p>EW-003 Expanding Lifelong Learning to Support the Workforce</p> <p>EW-004 Increasing Mental Health Provider Capacity</p> <p>HS-003 Creating a Mobile Health Clinic System</p> <p>HS-004 Establishing a Community Resilience Hubs Network</p>
<p>EW-003 Expanding Lifelong Learning to Support the Workforce</p> 	<p>ER-003 Building Continuity of Operations for Regional Businesses</p> <p>ER-004 Supporting a Diverse and Resilient Economy</p> <p>EW-001 Accessing Early Learning</p> <p>EW-002 Expanding Out of School Programming</p>
<p>EW-004 Increasing Mental Health Provider Capacity</p> 	<p>HG-002 Coordinating Housing Programs and Services and Enhancing Outreach</p> <p>HG-003 Expanding Housing Financing and Legal Service Programs</p> <p>ER-004 Supporting a Diverse and Resilient Economy</p> <p>EW-001 Accessing Early Learning</p> <p>EW-002 Expanding Out of School Programming</p> <p>HS-001 Expanding Behavioral Healthcare Facilities and Resources</p> <p>HS-003 Creating a Mobile Health Clinic System</p>
<p>HS-001 Expanding Behavioral Healthcare Facilities and Resources</p> 	<p>IF-004 Hardening Critical Facilities and Systems</p> <p>IF-005 Fortifying Essential Services and Facilities</p> <p>IF-007 Augmenting Resilient Energy Infrastructure</p> <p>ER-003 Building Continuity of Operations for Regional Businesses</p> <p>EW-004 Increasing Mental Health Provider Capacity</p> <p>HS-003 Creating a Mobile Health Clinic System</p>

Initiative	Related Initiatives
<p>HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services</p> 	<p>PC-002 Strengthening Emergency Logistical Resources IF-001 Diversify and Strengthen the Region's Emergency Shelter Network IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities IF-006 Rebuilding Resilient Communications Infrastructure IF-007 Augmenting Resilient Energy Infrastructure IF-008 Improving Potable Water Delivery IF-009 Improving Resilient Wastewater Infrastructure ER-003 Building Continuity of Operations for Regional Businesses HS-003 Creating a Mobile Health Clinic System HS-004 Establishing a Community Resilience Hubs Network</p>
<p>HS-003 Creating a Mobile Health Clinic System</p> 	<p>PC-002 Strengthening Emergency Logistical Resources IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities ER-003 Building Continuity of Operations for Regional Businesses EW-001 Accessing Early Learning EW-004 Increasing Mental Health Provider Capacity HS-001 Expanding Behavioral Healthcare Facilities and Resources HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-004 Establishing a Community Resilience Hubs Network</p>
<p>HS-004 Establishing a Community Resilience Hubs Network</p> 	<p>PC-002 Strengthening Emergency Logistical Resources IF-001 Diversify and Strengthen the Region's Emergency Shelter Network IF-002 Improving Evacuation Preparedness IF-004 Hardening Critical Facilities and Systems IF-005 Fortifying Essential Services and Facilities IF-006 Rebuilding Resilient Communications Infrastructure EW-001 Accessing Early Learning EW-002 Expanding Out of School Programming HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services HS-003 Creating a Mobile Health Clinic System CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector</p>
<p>CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector</p> 	<p>IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options NR-006 Reviving Public Recreation NR-007 Supporting Natural Resources Community Outreach and Education HG-007 Exploring Mixed-Use Development Opportunities ER-003 Building Continuity of Operations for Regional Businesses ER-004 Supporting a Diverse and Resilient Economy HS-004 Establishing a Community Resilience Hubs Network CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector CR-003 Advancing Public Art While Rebuilding</p>

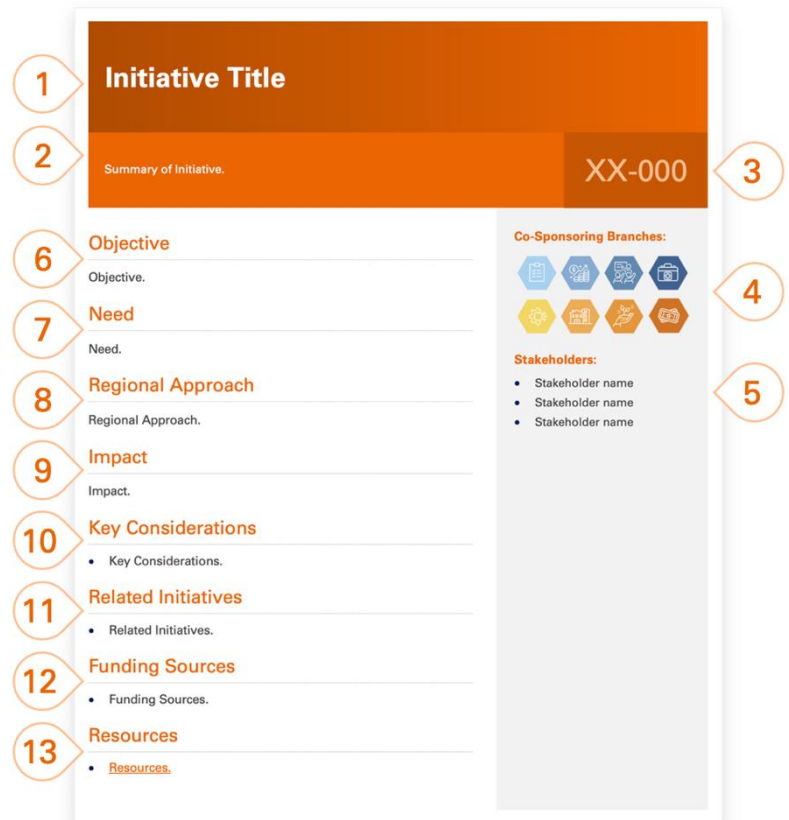
Initiative	Related Initiatives
CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector	ER-003 Building Continuity of Operations for Regional Businesses ER-004 Supporting a Diverse and Resilient Economy HS-004 Establishing a Community Resilience Hubs Network CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector CR-003 Advancing Public Art While Rebuilding
CR-003 Advancing Public Art While Rebuilding	IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options NR-006 Reviving Public Recreation NR-007 Supporting Natural Resources Community Outreach and Education ER-004 Supporting a Diverse and Resilient Economy CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector

How to Read an Initiative

The primary strategic actions of this plan are called Initiatives. Each Initiative provides common components of information that can be used by government officials, implementation partners, and the public to pursue work that would advance recovery and resilience in the Lee County area.

Members of the public seeking a high-level understanding of the Initiative can focus on the Objective and Need sections. Implementers can use the Need section to understand the common understanding of the key issues across all jurisdictions and use the Regional approach section to understand the how collaboration can be approached across the region for a more powerful impact.

1. **Title:** Initiative Name.
2. **Summary Statement:** A short explanation of what the Initiative will achieve.
3. **Classification:** Abbreviation of the Branch that developed the Initiative followed by the order number in the Plan.
4. **Co-Sponsoring Branches:** List of other Branches that contributed to building each Initiative.
5. **Stakeholders:** Relevant agencies and organizations that may support the Initiative goals and be key to carrying out actions.
6. **Objective:** Description of what the Initiative should achieve.
7. **Need:** Impacts and experiences within the community that illustrate the need for the Initiative.
8. **Regional Approach:** Current, planned, and proposed work within the region that aligns with the goals of the Initiative.
9. **Impact:** Description of the desired end state to be achieved by Initiative projects and actions.
10. **Key Considerations:** Specific items to consider that may aid in projects or actions under the Initiative.
11. **Related Initiatives:** Initiatives that are similar in nature and promote collaboration.
12. **Funding Sources:** List of potential funding sources that may support projects and actions under this initiative.
13. **Resources:** Additional information that may be helpful to Initiative projects and actions.





PLANNING & CAPACITY

Initiatives



Planning Regional Resilience

Work across jurisdictions and sectors to establish post-disaster research priorities and real time data sharing supporting ongoing Plan implementation.

PC-001

Objective

This initiative establishes priority areas for a shared research and data-gathering agenda for the region, promoting analyses that can guide ResilientLee Recovery and Resilience Plan implementation. The Initiatives in this Plan demonstrate a focus on key areas for which continually updated data would be useful as local leaders design, prioritize and refine specific solutions. Some key efforts to gather data are already planned or underway. These efforts should be identified, and the results shared broadly. In some cases, existing data could be leveraged to create maps and visualizations to better understand current or developing challenges. A region-wide discussion to prioritize data needs would identify key knowledge gaps, minimize the risk of redundant work, promote new partnerships in developing analyses, and help communities understand the challenges they face.

Need

Housing, employment, and transportation trends can all shift in the months and years following a storm, as residents adapt to a new environment. Additionally, post-storm policy decisions can be informed by the identification of new gaps and risks and how those interact with community stressors like homelessness and attainable housing shortages. The job of identifying and communicating community changes that can be reflected in research and data analysis, and/or updating risk assessments is not owned by any single office, government, or authority – it is shared by all.

Co-Sponsoring Branches:



Stakeholders:

- County planning and public safety departments
- Municipal planning and public safety departments
- Universities
- Health and mental healthcare providers
- Real estate development community

Regional Approach

In a region with many community differences and diversity, developing a mutual understanding of challenges and trends can be important for building resilience. In the Plan development process, stakeholders identified the below key areas where reviewing, developing or refining data or data analyses, and considering public engagement around findings, is important:

- **Emergency Logistical Resources and Supply Chain Routes:** Review, develop and refine data analyses that can assist planners in identifying gaps in current emergency resource distribution – how the movement of emergency supplies, food, gas, and medical supplies reach key distribution centers across the region and whether those routes are vulnerable. The understanding of distribution center location and purpose should be informed by each jurisdiction. This is particularly important as the Hurricane Ian experience of storm surge is making more stakeholders aware of additional transportation route risks that need to be mitigated.
- **Communication Capabilities:** Work across public and private sectors to develop new and updated data analyses that identify potential gaps in communication capabilities in immediate post-disaster operations. Use the experiences of Hurricane Irma and Ian to refine understanding of how gaps in the current communication networks impacted operations in different areas. For example, did the inability of residents to communicate with family members in some areas lead to an increase in first responder calls in those areas? What areas should be targeted for prioritized improvements?
- **Transportation and Mobility Options:** As the region updates data showing future transportation needs, researchers should consider potential changes in community population and disaster risk. This work should be used to inform community stakeholders of existing transportation situations, consider projected future needs, and provide a well sourced, unified resource for all planning efforts involving transportation.
- **Guide and Inform Hydrological and Ecological Direct Actions and Regulatory Actions:** Develop and conduct community engagement around data analyses that demonstrate where post-storm housing development patterns or plans may impact natural habitats, protected species, green infrastructure, and stormwater infrastructure. Additionally, Lee County plans to produce a Comprehensive Vulnerability Assessment that will generate surge, rainfall, and compound flood projections to 2070. While it is designed to specifically evaluate vulnerabilities of public critical assets, the modeling can inform additional efforts related to resilience and should be promoted to stakeholders and the public.
- **Mapping Access to Essential Services to Identify and Prevent Future Disaster Impacts:** The essential services that allow community life to continue after a storm are important to supporting short- and medium-term recovery. For example, when residents cannot access capital because a local bank is closed, those residents may choose to relocate or develop emergency needs. This Plan identifies the need to work across jurisdictions to map these essential services and identify vulnerabilities. This information should help develop a region-wide understanding of the distribution of these services and where disruption is more likely. This understanding can promote design, relocation, and/or utility redundancy considerations.
- **Supporting Community Resilience:** Initiatives in this Plan promoting increased capabilities for mobile health response in post-disaster environments and the establishment of community-based “Resilience Hubs” would both benefit from improved understanding of the relative position of communities at

increased risk to known hazards and healthcare-supporting assets. As the region develops new support for communities, planners should identify the priority areas that need additional access.

- **Promoting Attainable Housing Through “Mixed-Use” Zoning and Other Policy Approaches:** Developing a cross-jurisdictional data analysis that demonstrates the region-wide approach to zoning policy – where homes and businesses can legally be developed - could help promote a unified understanding of how the County anticipates growth over the course of the long-term recovery. Data analyses would inform planners and community stakeholders of key existing characteristics including changing demographics, public amenities, and infrastructure while also providing damage and risk assessment information in a well-sourced, unified resource for all master regional planning. Additionally, data on employment trends and commuting patterns have been demonstrated in past disaster-impacted communities to be vulnerable to change, as industries recover and reposition.
- **Community Contingency Planning:** as part of contingency planning, the County and each municipality can conduct and/or update its own Threat Hazard Identification and Risk Assessment (THIRA). Each municipality within Lee County has unique threats and hazards as well as those that span the County. It would be beneficial for each municipality to understand the threats and hazards at the hyper local level so they can focus on and more accurately mitigate their specific potential hazards.

Plan implementers should work with local and County planning teams to conduct this work.

Impact

Focused data analysis in key areas can promote informed policymaking. Additionally, by developing data products that are recovery relevant, post-disaster research can help the region identify trends and outcomes that may inform future response and recovery efforts.

Key Considerations

- The development of “Story Maps” or special community engagement tools to bring data findings to life for stakeholders and the public is a best practice for developing regional shared understanding of challenges.
- Community engagement to help define understandings of what constitutes a community “asset” or an “essential service” is important as new research is considered.
- The pace at which current data sets on community characteristics are updated may be too slow to support dynamic recovery actions. Some cities and counties take a specialized approach to updating data or identifying key indicators that can inform efforts in between federal or state reporting schedules.
- In the Lee County area, universities have played an essential role in answering research questions related to economic, housing, and environmental issues. Further formalizing relationships to produce more cross-sector work and analysis focused on recovery may allow the region to produce even more beneficial models and data products.

Funding Sources

- Federal Emergency Management Agency
- United States Department of Transportation
- National Oceanic and Atmospheric Administration
- Florida Division of Emergency Management
- Florida Department of Environmental Protection
- Florida Department of Transportation

Resources

- [2022 Hazard Identification and Risk Assessment.pdf \(leegov.com\)](#)

Strengthening Emergency Logistical Resources

Assess emergency logistical resource needs of critical services and identify, strengthen, and maintain existing recovery and response distribution centers to streamline recovery operations after a disaster.

PC-002

Objective

Establishing, strengthening, and maintaining existing recovery and distribution centers is an essential component of disaster recovery management. These centers house and distribute the necessary resources to prepare and protect the public, property, and the natural environment during and after disasters. The function of these centers can be improved through evaluating and updating existing logistics plans that seek to enhance disaster response resources and account for critical community resources. Incorporating facility hardening measures is also necessary to protect supplies during catastrophic events. Large warehouses and distribution centers should have secure perimeters, security checkpoints, alarms, and cameras. Other hardening considerations include maintaining the supply chain through safe and efficient practices that reduce errors, labor time, and increase accuracy and service. A third crucial component of resilient distribution centers is maintaining and bolstering the infrastructure by undergrounding electricity, inspecting systems regularly, and verifying that buildings are safe and reliable. Logistical planning is key to cultivating resilience by ensuring that essential resources can be accessed before, during, and after disasters.

Need

Immediately prior to and after disasters, critical resources often become scarce while demand increases for essentials. A multitude of impacted entities begin to compete for available resources to aid their communities. Existing stockpiles may be quickly depleted, requiring additional resources and supplies that can be more

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Health
- Florida Department of Transportation
- County departmental experts on public safety and social services
- Law enforcement and first responders
- Municipal experts on public safety and social services
- Emergency services agencies
- Commercial suppliers
- Community based organizations
- Volunteer Organizations Active in Disasters
- Faith-based organizations

difficult and slower to replenish if supply chain networks are disrupted. Similarly, distribution centers may be directly impacted by a disaster or emergency event (e.g., power outages, flooding). Ensuring that distribution centers are properly prepared for the surge in demand, potential impacts to supply chain, hazard conditions and have streamlined operations is crucial to providing for the community during crisis. Additionally, supply stockpiles, especially at the local level, can be costly to upkeep; jurisdictions track and replace expiring commodities, cover high storage costs, and potentially compete to hire staff. The common purpose of, and challenges associated with, maintaining these centers indicate the region may be able to realize benefits through collaboratively implementing improvements at-scale.

Regional Approach

During catastrophic events, it is important for jurisdictions to maintain individual capacity because some supplies need to be readily accessible; however, there are opportunities to share knowledge and improve capacity between municipalities. New regional partnerships can be forged that will address the challenges of sharing resources and increasing efficiency. For example, an alternate approach to bolstering logistics capacity could include leveraging community partnerships with agencies and organizations that have available storage space. Existing regional networks including schools, universities, and event centers. Established partnerships with vendors that maintain supply inventories is crucial to the success of distribution centers. Currently, United Way and Collaboratory provide third party donation resources, although the State of Florida has established its own non-profit for this purpose. An understanding of any benefits or risks for Lee County to establish a nonprofit for these resources could be explored or formalizing the relationship with these two local non-profit partners. Also, working with Volunteer Organization Active in Disasters and faith-based organizations can sustain the capacity to support logistical needs. Planning and coordinating with the Resilient Hub System as well as the Mobile Health Clinic would also bolster the logistics capacity in future activations.

Impact

By integrating facility hardening into the disaster response framework, the region can improve the resilience of its critical facilities and optimize all available resources related to long-term recovery. Extensive planning is required that fosters effective coordination among all stakeholders including non-profits and faith-based organizations, to streamline logistics, provides accessible resources, integrate partners and community groups, and bolster the availability of vital resources when the community is the most vulnerable. Regional logistics coordination may also be able to leverage additional resources acquisition, transportation, distribution, staging, and supply - creating redundancies by cultivating new community relationships.

Key Considerations

- Develop a comprehensive understanding of the vulnerabilities and gaps for critical facilities and community resources during a disaster including a comprehensive listing of all current recovery and distribution centers.

- Determine and prioritize hardening measures for recovery and distribution centers and conduct a survey of the logistical needs of the community to develop a comprehensive plan for recovery and distribution centers that also identifies cost-effective ways to enhance resources.
- Establish partnerships within the community that will play an active role in the operation of the distribution centers and can provide insight to the current maintenance and operation procedures.
- Evaluate, plan for, and train staff on the logistics of setting up, managing, and deactivating distribution centers to promote a smooth operational flow of supplies, both inside and outside of the structure.
- Establish a 501c3 for Lee County to provide preparedness and strategic coordination with third parties around disaster donation management.
- Maintain continuity plans/procedures for distribution facilities to minimize downtime and potential loss of services to the community.

Related Initiatives

- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- IF-006 Rebuilding Resilient Communications Infrastructure
- IF-007 Augmenting Resilient Energy Infrastructure
- ER-003 Building Continuity of Operations for Regional Businesses
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-003 Creating a Mobile Health Clinic System
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- United States Department of Homeland Security
- United States Department of Housing and Urban Development
- United States Department of Agriculture
- Florida Division of Emergency Management
- Florida Department of Environmental Protection

Increasing Cost Recovery Capacity

Incorporate cost recovery planning into preparedness efforts to increase jurisdictional resilience.

PC-003

Objective

Jurisdictions can develop a Cost Recovery Plan as part of emergency preparedness efforts to support the ability to track and align post-disaster recovery resources, so that they are utilized to the maximum potential. State and federal assistance is designed to supplement the response and recovery efforts of a local jurisdiction when the costs and damages sustained during a specific disaster event exceeds the capacity of a local government to respond, recover, or build resiliently for the next disaster. Cost Recovery Plans increase resilience by preparing jurisdictions to follow financial policies and procedures, improve cost tracking processes, improve document management processes, and define how post-disaster funding will be identified and aligned with strategic priorities.

Need

The effective management and strategic use of post-disaster funding opportunities requires trained staff and pre-established policies, procedures, and systems. In 2023, the State of Florida passed SB 250 (2023), encouraging local governments to develop an emergency financial plan for major natural disasters. Developing a jurisdiction-specific Cost Recovery Plan or other similar emergency financial plan is an emerging best practice in the emergency management sector given the level of effort and complexity of managing response and recovery resources.

The Lee County *Hazard Identification and Risk Assessment* describes that the County is “susceptible to a multitude of natural hazards that occur with some degree of regularity.”²⁷ With \$112 billion in damages, Hurricane Ian is the third costliest tropical system to make

Co-Sponsoring Branches:



Stakeholders:

- Florida Division of Emergency Management
- County departmental experts on administration, public safety, and procurement
- Municipal departmental experts on administration, public safety, and procurement
- Health and mental health providers

landfall in the United States (U.S.), behind only Hurricane Katrina (2005) and Hurricane Harvey (2017).⁵ The tracking and submission of eligible response and recovery expenses reimbursable through State or Federal sources for events like Hurricane Ian is a significant burden on jurisdiction staff who are also managing the response to the disaster and personally recovering. Federal reimbursement through the Federal Emergency Management Agency (FEMA), Federal Highway Administration (FHWA), and many other programs and agencies often requires lengthy documentation. Proper documentation includes accurate and detailed recordkeeping, assessment of damage and incurred costs, and regular reporting.

Regional Approach

A regional approach to increasing cost recovery capacity would include each jurisdiction developing financial plans and identifying the tools to recover financially from disasters. While each municipality has its own financial and documentation systems, a collective regional approach would allow for potential streamlined planning, resource sharing, and cost savings. As part of completing financial plans, jurisdictions could collaborate to develop memorandums of understanding (MOUs) or cooperative purchase agreements to effectively share resources, therefore lowering costs and reducing the financial burden on the community.

A well-designed Cost Recovery Plan is one method to build capacity to recover costs effectively. Prior to Hurricane Ian, Lee County government was developing a Cost Recovery Plan and expects to formally adopt its plan in 2024. Municipalities that do not currently have cost recovery plans can reference Lee County's draft Cost Recovery Plan as an example that establishes an approach, roles and responsibilities, and key processes for cost recovery. The FEMA *Public Assistance Program and Policy Guide* can also be used as a tool during plan development to understand the expectations of one significant source of disaster funding. A holistic approach to cost recovery can also include developing additional resources to support complex federal grants management, maintaining effective municipal and community engagement, streamlining information systems management, considering proactive training or other capacity building activities for future response and recovery operations, and developing tools to support cost recovery operations during the planning process.

Impact

Emergency financial planning such as Cost Recovery Plans can aid the community with recovering the eligible costs incurred during and after a disaster. The goal of pre-disaster cost recovery planning is to minimize the administrative burden of conducting cost recovery operations (i.e., cost tracking, documentation, and reporting) and maximize the financial benefit to promote holistic and effective recovery.

In addition to the direct benefits of cost recovery planning, the Florida Division of Emergency Management (FDEM) in 2023 created a new initiative, the Florida Recovery Obligation Calculation (F-ROC), that standardizes, streamlines, and simplifies the FEMA Public Assistance process. FDEM acts as a pass-through entity that receives funding from FEMA to then distribute to eligible local jurisdictions. Through F-ROC, FDEM intends to

⁵ Lee County. (2023). Hurricane Ian After-action Report. <https://www.leegov.com/hurricane/Documents/AAR/Lee%20County%20Hurricane%20Ian%20AAR.pdf>

fast-track the distribution of funding to Applicants that can demonstrate past responsible use of funds and documentation of cost recovery processes. Under this new approach, Lee County and the municipalities can position themselves to potentially receive post-disaster funds on an expedited timeline through responsible funds management and cost recovery planning. Utilizing this statewide training program may result in a quicker recovery and reduced risk for Applicants.

By maintaining cash flow during and after a disaster and expediting recovery, the preparedness efforts described in this Initiative may help to minimize the long-term economic impact of disaster events on the community. In a tourism-based economy that relies on the return of seasonal residents and visitors post-disaster, the efficient and effective recovery of public facilities in areas such as the City of Sanibel and the Town of Fort Myers Beach is especially important and will provide economic benefits for all of the County.

Key Considerations

When approaching the implementation of this Initiative the following should be considered:

- Analysis of risk and vulnerabilities to hazards;
- Potential costs and damages incurred during response and recovery;
- Potential funding sources and management;
- Development of additional resources to support complex federal grants management;
- Effective and streamlined information systems management;
- Proactive capacity building for future response and recovery operations; and
- Development of tools to support cost recovery operations during the planning process.

Related Initiatives

- PC-004 Supporting Regional Debris Management
- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network

Funding Sources

- Federal Emergency Management Agency
- United States Department of Housing and Urban Development
- United States Department of Transportation
- Florida Division of Emergency Management

Supporting Regional Disaster Debris Management

Address existing challenges of debris management while planning for future hazards to minimize the impact of debris staging and storage sites on natural resources.

PC-004

Objective

The long-term recovery from Hurricane Ian provides an opportunity to incorporate lessons learned by updating debris management plans with regional approaches to the communication of rules, roles, and responsibilities for debris removal in future events. Disaster debris management plans are common practice in emergency management to prepare jurisdictions for the removal, recycling, handling, and monitoring of disaster debris. Proper tracking and documentation of debris management is also a critical component of successful cost recovery for eligible expenses during federally declared disasters when additional financial resources may become available to local jurisdictions. The objective of this Initiative is to address the recovery of the region as it removes remaining Hurricane Ian debris, understand the impacts of the debris locations utilized during the storm, and assist jurisdictions in building additional capacity to respond to future events requiring massive debris operations.

Need

The Lee County region needs to increase its capacity to manage the tremendous amount of debris that results from relatively rare but very severe, destructive events like Hurricane Irma (2017) and Hurricane Ian. Post-Hurricane Irma, Lee County recognized the need for additional debris staging sites and increased the number to 33 sites (and increased the number up to about 40 sites as of November 2023). These additional sites provided Lee County flexibility in problem-solving logistical challenges when responding to the catastrophic flooding of Hurricane Ian but can be expanded further.

Co-Sponsoring Branches:



Stakeholders:

- Federal Emergency Management Agency
- Environmental Protection Agency
- Florida Division of Emergency Management
- Florida Department of Environmental Protection
- County departmental experts on natural resources, public safety, solid waste, communications, and parks
- Municipal departmental experts on communications and public works

Hurricane Ian resulted in more than 12 million cubic yards of debris, with 6.3 million of that collected roadside in unincorporated areas. Due to the catastrophic impacts of storm surge and coastal flooding, some logistics staging areas also sustained flooding, so mutual aid teams shifted to utilize sites intended for debris staging. This successfully sustained critical logistics activities but further reduced available debris management sites. In other areas, like Sanibel and Captiva, the number of available debris staging sites will be inadequate to manage the large amounts of debris generated by tropical storm systems. New on-island debris management sites must be identified. As recovery has progressed, a new challenge has emerged – that of mitigating the negative environmental impacts of storm clean-up, especially in environmentally sensitive areas such as around mangroves.

Additionally, successfully completing all debris management processes often requires a significant amount of documentation and cross-jurisdiction coordination that puts a severe strain on staff resources during and after major events. Navigating the disaster reimbursement process requires significant staff capacity and expertise to identify and submit eligible costs as well as manage federal grants. On October 6, 2022, just days into the response to Hurricane Ian, President Biden approved the Governor’s request for an additional 30 days of the federal cost share for debris removal. The efforts to remove debris require coordination with federal, state, and local jurisdictions, and the public to properly handle collection and disposal. Recovery and preparedness initiatives that implement efficiencies within any of the processes associated with debris management contribute to the resiliency of the region through potentially faster debris management/removal and by helping to limit strain on responders and making the best use of available personnel.

Regional Approach

A regional approach to debris management includes evaluating the current identified debris locations in both municipal and unincorporated areas, considering the identification of additional sites to prepare the region for future disasters, and incorporating any new processes into emergency response, recovery, and debris management plans. The Florida Department of Environmental Protection provides guidelines for the establishment, operation, and closure of disaster debris management sites. The County and municipalities can consider identifying additional temporary debris removal staging and storage sites as well as final disposal methods and locations that could remain operational even when storm surge and flooding renders more coastal or lower-lying sites temporarily unusable. Even more imperative is final disposal for construction and demolition debris within the region as the debris is a pipeline from the impacted streets to the landfills (or energy plants plus landfills) that are the final location for the debris. Regional development of construction and demolition landfills will be essential to handle debris from storm surge or intense wind damage to buildings. The County and municipalities can prepare plans to better manage the debris that originates in its jurisdiction to best ensure the region can be prepared to manage the catastrophic impacts of future events. At the same time, there must be recognition that barrier islands and smaller communities have limited availability to create additional debris management areas, and those jurisdictions and the County can work in partnership to ensure debris generated from major storm events can be managed to mitigate public health and safety risks. As part of these site evaluation and planning efforts, jurisdictions can consider the implications of debris storage and staging locations on the environment.

During Hurricane Ian, storm surge washed a catastrophic amount of debris from the barrier islands into nearby environmentally sensitive estuaries and mangrove forests. Efforts to remove debris in environmentally sensitive areas should consider cost feasibility, public safety, and environmental impacts where removal could cause more environmental harm than good. Through collaboration with natural resources experts, emergency management leaders may be able to integrate best management practices for removal of debris from environmentally sensitive areas together with low impact debris staging areas.

The extra capacity needed to complete all debris management, removal, tracking, and documentation processes during major disasters taxes personnel and often requires independent contractors that augment staff resources. Further, cost recovery requires monitoring of debris pick up to meet the requirements for federal programs. The State of Florida passed SB 250 (2023) that encourages local governments to have contracts for debris removal contractors in place by providing a model contract. Jurisdictions could also increase debris management capacity by establishing no cost, “on call” agreements with contractors during blue skies that can be quickly activated when needed.

Public education and communication about the rules and regulations related to debris removal is essential to timely and efficient storm debris pick up. Public information and communications offices can work together across jurisdictions to develop and disseminate consistent messaging that educates the public and contractors on appropriate debris removal. Coordinated messaging around common areas of confusion, including processes for debris management on private property, is especially important to prevent further challenges. Conflicting messages can cause confusion, slow the overall process, and lead to issues with cost recovery.

Impact

Quick and efficient removal of disaster debris is in the public’s best interest to begin recovery and prevent secondary impacts from lingering debris such as environmental degradation, public safety risks, emotional impacts reminding survivors of disaster-related trauma, and further economic loss. With effective regional planning and coordination of disaster debris sites, the secondary environmental, emotional, and economic impacts from catastrophic debris can be minimized.

Key Considerations

- The *Hurricane Ian After-Action Report* identified the following recommendation: “The County should consider conducting a land use assessment to both determine the impacts of a Category 5 hurricane on various County properties and increase the number of available logistics staging areas and debris staging areas.”
- Consider the need for interjurisdictional memorandums of understanding to assist in debris management and staging as these locations are becoming less available, especially within more populated jurisdictions. Additionally, permit waivers should be considered and advocated for by the Florida Department of Environmental Protection.

Related Initiatives

- PC-003 Increasing Cost Recovery Capacity
- IF-006 Rebuilding Resilient Communications Infrastructure
- IF-010 Building Back More Resilient Working Waterfronts
- NR-001 Protecting Coastal and Natural Buffers
- NR-002 Flood and Stormwater Management
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration

Funding Sources

- Federal Emergency Management Agency
- Federal Highway Administration
- United States Army Corps of Engineers
- United States Environmental Protection Agency
- Florida Division of Emergency Management
- Florida Department of Environmental Protection



INFRASTRUCTURE

Initiatives



Diversify and Strengthen the Region's Emergency Shelter Network

Improve sheltering facilities and operations for community members and first response partners by expanding capacity and hardening existing shelter facilities.

IF-001

Objective

During and after Hurricane Ian, shelters provided respite for many families and individuals threatened by the storm, made homeless by the impacts, or needing emergency assistance. As the County experiences a variety of changes – from population shifts to increasingly severe storms – the network of shelters across the region should be evaluated and then strengthened to better support changing recovery needs in all neighborhoods and to be resilient to disaster conditions. Additionally, the region can pursue increases in the number, type (considering the everyday building function) and position of shelters in the Lee County area. Even as the region pursues diversity, a continuing cornerstone of the shelter strategy will continue to be the use of area schools as shelters; Florida Statute 1013.372 requires that all new educational facilities must be able to serve as public shelters for emergency management purposes unless the facility is exempted by the applicable board with the concurrence of County Emergency Management/Public Safety.

Need

While utilizing schools as shelters maximizes the availability of state and other grant funding for modernizing and expanding education facilities to support the County's growing population, there is also the need to diversify sheltering options to increase accessibility and decrease situations in which school needs to resume but residents still require shelter. It is vital to identify other publicly owned infrastructure or planned infrastructure that can be retrofitted or hardened to comply with shelter standards. Assisted living facilities can also harden their buildings to required Florida

Co-Sponsoring Branches:



Stakeholders:

- Florida Division of Emergency Management, Florida Department of Health, and other state partners
- County departmental experts on public safety and emergency management
- Municipal departmental experts on public safety and emergency management
- School District
- Access and functional needs advocates

Building Code standards to protect residents. Efforts to support residents with access and functional needs as well as families with members with developmental disabilities like Autism, should be considered a priority in this planning process.

Regional Approach

It is recommended that the region evaluate and implement strategic improvements focused on strengthening operations, hardening selected facilities (e.g., backup power and generators), identifying locations for new facilities, augmenting operations to include additional training opportunities and coordination for staff, improving communications and messaging to the public, and expanding the services available. Identifying locations for new facilities can also include vacant retail spaces that could be converted into a shelter. This approach can also include setting new standards for access to healthcare for those at shelters by potentially partnering with healthcare and mental health providers and incorporating wraparound services for those who could become homeless following a catastrophic event.

Impact

Lee County has taken steps towards diversifying the sheltering strategy with its long-standing relationship with Hertz Arena, and this strategy should be further developed to identify additional alternate sheltering options for the public. Identifying additional alternate sites will also take the pressure off schools to serve as the only options for sheltering so that students can return to school as soon as practicable following a disaster event. Also, by providing additional resources while in shelters, residents will be better equipped to resume normal, everyday life. Planners can also emphasize demobilization priorities for shelters to expedite the resumption of education in school-based shelters as soon as possible after a disaster. If increased shelter capacity is realized, there may be opportunities to partner with nonprofits or state agencies to provide increased services for those that do not qualify for special needs shelter facilities but require additional support or services to safely weather a disaster in a public shelter.

Key Considerations

- Analyze the sheltering data and timelines from Hurricane Ian to identify gaps and bottlenecks.
- Develop an assessment tool for facilities and operations to identify existing shelter facilities to determine hardening and locations for new shelter facilities along with services to be provided.
- Evaluate prospects for using several smaller shelters instead of one larger shelter.
- Explore retrofitting generators for all existing shelters as a key policy going forward and confirming resilient power capable of operating the HVAC system for up to 96 hours.
- Develop a demobilization plan for emergency shelters, with an emphasis on releasing schools so they can return to normal operations following disasters in a timelier manner and reestablish normalcy.
- Improve healthcare services provided at shelters by establishing partnerships with a variety of partners that includes those with knowledge of the access and functional needs community as well as other vulnerable populations in the County.
- Conduct exercises that activate shelter staff and stress test shelter operations.

- Increase the capacity of Special Needs Shelters.
- Consider establishing agreements with neighboring counties to expand the inland sheltering network and increase capacity.

Related Initiatives

- PC-003 Increasing Cost Recovery Capacity
- IF-002 Improving Evacuation Preparedness
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- IF-010 Building Back More Resilient Working Waterfronts
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- United States Department of Housing and Urban Development
- United States Department of Health and Human Services
- United States Department of Homeland Security
- United States Department of Agriculture
- Philanthropic Groups

Improving Evacuation Preparedness

Continue to leverage technical and community expertise in the planning and communication of evacuation plans and procedures to generate successful evacuations.

IF-002

Objective

The constant improvement, communication, and understanding of evacuation plans are critical parts of how regions prepare for disasters and protect the lives and safety of residents. Every time an evacuation occurs, plans are tested, and response officials, residents, and businesses learn important lessons. This Initiative creates a platform for the Lee County area to fully understand how community members fared during evacuations efforts and what changes might be necessary.

Emergency planners can lead an engagement effort that focuses on understanding how to assist those with special needs in the evacuation process, determining the preferred destinations of residents in an evacuation, understanding patterns in decision-making among residents, and understanding how best to communicate and inspire preparedness planning among residents. Those with access and functional needs usually require more time to be evacuated. The engagement effort can also provide an opportunity to reinforce the preparations that residents should make in advance if they are able to shelter in place or what should be ready in a “go bag” if they need to temporarily seek higher ground at a shelter or with friends. Further, education efforts could expand to offer additional guidance to residents with unique concerns (e.g., business owners, boat owners) to reinforce evacuation expectations and objectives.

By engaging the public and key stakeholders in emergency management and law enforcement across the region, key lessons can be integrated into future public communications, training, and planning.

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts on public safety
- Municipal departmental experts on public safety
- Fire districts
- Law enforcement agencies

Need

Prior to Hurricane Ian making landfall, Lee County issued evacuation orders in alignment with existing plans; increasing transparency of plans and procedures during blue skies can help set public expectations and enhance communications with residents during future catastrophic events. The *Hurricane Ian After-Action Report* identified some high-level needs related to evacuation. An additional assessment, inclusive of residents across the region, can be leveraged to better predict and plan for future challenges during emergency incidents.

Regional Approach

Evacuation planning and education can support the needs of the whole Lee County community through an intentional focus to provide solutions for and communications to all members of the population, especially those with high-risk factors or in higher-risk locations. The County and municipalities can continue to emphasize preparedness actions, such as sharing talking points in coordination with the local media and actions that the public can take prior to an evacuation order (e.g., boarding up windows, gathering shelter in place supplies, packing a go-bag), that can be shared with the public once a hurricane is forecasted to impact Southwest Florida.

Additionally, jurisdictions can provide communication about the timing and thresholds that would result in a potential evacuation order during the runup to a storm to manage the expectations of the public. Evacuation routes are a precious commodity during an event, and it is crucial to have those most vulnerable utilizing them in the most efficient manner.

These efforts can be bolstered with community engagement findings to determine the most effective communication strategies and messaging by conducting focus groups and interviews with emergency managers and law enforcement that assisted in evacuation efforts. Such a study can be augmented by evaluating the placement of evacuation routes in context of trends in population growth to establish a plan for shorter evacuations over out-of-town evacuations, specifically providing more assistance to those on barrier islands.

Impact

The intended outcome of increased evacuation planning and communication efforts would be that community members have a thorough understanding of evacuation processes and are able to get to (or stay in) safety as directed during an event. Reported findings could be used to determine how to prepare communities for evacuation in future disasters and whether new evacuation considerations are necessary. The economic impact of shorter distance evacuations versus out-of-state evacuations could also be crucial to helping the County keep money locally, potentially accelerating economic recovery.

Key Considerations

- The *Hurricane Ian After-Action Report* identified the following recommendations in future events:
 - Recommendation: The County should continue to emphasize preparedness actions, such as sharing talking points in coordination with the local media and actions that the public can take prior to an evacuation order (e.g., boarding up windows, gathering shelter in place supplies, packing a go-bag), that can be shared with the public once a hurricane is forecasted to impact Southwest Florida.
 - Recommendation: The County should consider providing communication about the timing and thresholds that would result in a potential evacuation order during the runup to a storm to manage the expectations of the public. Use multiple data collection methods to capture the experiences of residents who evacuated successfully and those who had difficulty.
- Conduct focus groups and interviews with emergency managers, fire districts, and law enforcement personnel who assisted in evacuation efforts.
- Study the placement of evacuation routes and trends in population growth to establish a plan for shorter evacuations over out-of-town evacuations, specifically assisting those on barrier islands.
- Incorporate lessons learned into the development of new or updated evacuation plans.

Related Initiatives

- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network
- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- IF-010 Building Back More Resilient Working Waterfronts
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- United States Department of Transportation
- United States Department of Homeland Security
- United States Department of Housing and Urban Development
- National Fish and Wildlife Foundation – National Coastal Resilience Fund
- Federal Highway Administration
- Federal Transit Administration
- National League of Cities
- Florida Division of Emergency Management

Resources

- [Lee County Hurricane Ian AAR.pdf \(leegov.com\)](#)

Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options

Improve the resilience of transportation infrastructure through mitigation and modernization while expanding transportation options to improve livability.

IF-003

Objective

The need to rebuild and further safeguard transportation infrastructure damaged by Hurricane Ian comes as the County is also experiencing an increase in population and community stress related to commuting. This Initiative seeks to advance projects that promote a regional transportation system that is able to withstand disaster shocks as well as accommodate a growing population by identifying key investments supporting social mobility options and reliable, protected infrastructure.

To move people throughout the region effectively, roadways, railways, road surfaces, street lighting, traffic signals, parking structures, curbs, and multi-use paths will need to be hardened, upgraded, and sometimes redesigned. Canal network and drainage improvements along with bridge rehabilitation, road surface repaving, traffic signal improvements, and additional resources for preventative maintenance will be key in hardening transportation infrastructure in the County.

In addition to projects expanding existing transportation infrastructure, this initiative promotes local stakeholders and planning experts exploring where social mobility options (e.g., vanpooling, e-bikes, park-and-ride) might be most appropriate and have the greatest impact, with consideration given to community differences. Increased options can help reduce the need for roadway expansions or new routes.

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Transportation
- County departmental experts on parks, planning, transit, and transportation
- Municipal departmental experts on public works, economic development, and transportation
- Local port authority

Need

Storm surge due to Hurricane Ian flooded large areas of the County and exposed transportation infrastructure to saltwater, hampering mobility and endangering some residents. As the region began to recover, many roads remained difficult to navigate for months due to the high number of downed traffic signs and damaged traffic signals.

The transportation system is also under stress from overuse. In the County, the average one-way commute time for all workers has increased from 21 minutes in 1990 to 28.6 minutes in 2021. In addition, the needs of the local airports should be factored into efforts for the transportation sector as well as accounting for their role in the economic and public safety interests of the region.

Regional Approach

A resilient transportation system can withstand the impacts of disaster while also providing options that increase efficiency and alleviate stress on the system in a recovery environment.

Infrastructure

Across all areas of transportation infrastructure, Lee County and its municipalities will identify and prioritize key projects for the post-storm environment focusing on the following key areas:

- Bridge rehabilitation or improvement and road surface repaving.
- Continued improvement of traffic infrastructure via:
 - GIS locating, traffic sign hardening, signal mast arm hardening, signal detection hardening/loop replacement, and traffic signal cabinet security hardening, and
 - Exploring the possibility of amending Lee County standard specifications for sign installations to improve resilience.
- New drainage systems protecting residential areas for vulnerable populations.
- Better management of vegetation in key canals that impact drainage and contribute to roadway flooding.
- Coordinate a regional unified maintenance schedule for mitigation features that impact roadways that considers the varying standards and levels of maintenance required at the Federal, State, County, and Municipal levels.

Additionally, the Lee County Metropolitan Planning Organization, which conducts regional transportation planning that impacts State appropriations and actions, can develop a “resilience element” that highlights and prioritizes projects that mitigate disaster risks.

Mobility Options

To incorporate alternative transportation modes into municipal transportation, priorities will be identified across the Lee County area. An interjurisdictional approach to planning is essential and amendments to municipal Comprehensive Plans may be considered. The Lee County Metropolitan Planning Organization may be able to play a coordinating role in unifying varying interests.

The key elements to be addressed in the planning process include the following:

- Introduce a tiered street network structure (streets for vehicles, streets for people) based on urban, suburban, and rural characteristics that recognizes the tenets of complete streets as guiding principles.
- Continue to recognize the tenets of complete streets as guiding principles for transportation and capital expenditures decisions.
- Work with jurisdictions to prepare community-specific mobility plans to integrate all aspects of transportation form and function. Utilize regional case studies on mobility options to help jurisdictions determine pathways for desired options.

Impact

The repair of damaged infrastructure post-disaster creates an opportunity to rebuild a resilient transportation system that can withstand impacts due to coastal flooding, winds, and other hazards. To improve liability and access, the planning process should account for projected growth and include assessments of community transportation needs. The impact of providing safe and reliable transportation modalities and alternate methods of transportation would benefit the entire region before, during, and after catastrophic events.

Key Considerations

- Consider completion of a holistic plan for transportation hardening, resilience, and strengthening of disaster related emergency road clearance.
- Consider study and assessment of future transportation needs with recommendations for resilient expansion.
- Consider lowering one-way commute times for workers. Providing additional transportation options may be a beneficial approach to commuting issues, which has implications in both the housing and economic development sectors.
- Consider ways to incentivize an increase in physical activity while also decreasing bicycle, pedestrian, and vehicle fatalities.
- Consider ways to decrease vehicle miles traveled and increase driving affordability.
- Consider the complete streets model as an approach to plan, design, and build streets that enable safe access for all users.
- Continue to evaluate opportunities in emerging technology, like telemetry, which may mitigate impacts on current traffic control systems and could benefit the system for mobility. This tactic should be weighed against cost, benefit, and risk analysis.
- Consider transportation ideas that center around moving people not vehicles.

Related Initiatives

- IF-002 Improving Evacuation Preparedness
- IF-007 Augmenting Resilient Energy Infrastructure
- IF-010 Building Back More Resilient Working Waterfronts

- NR-006 Reviving Public Recreation
- HG-001 Supporting Regional Housing Coordination
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-003 Building Continuity of Operations for Regional Businesses
- ER-004 Supporting a Diverse and Resilient Economy
- EW-001 Accessing Early Learning
- EW-002 Expanding Out of School Programming
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector
- CR-003 Advancing Public Art While Rebuilding

Funding Sources

- United States Department of Energy
- Federal Highway Administration
- Federal Transit Administration
- National Center for Mobility Management
- United States Department of Transportation
- Florida Department of Transportation
- Florida Department of Environmental Protection
- Half Resilient Florida Grant Program
- Florida Sea Grant
- South Florida Rail Transit Authority

Hardening Critical Facilities and Systems

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

IF-004

Objective

Developing a holistic, regional approach to hardening infrastructure would support readily available critical services for the community, particularly the most vulnerable, immediately following disasters. Effective risk management requires an understanding of criticality and urgency as well as the associated interconnections of infrastructure. FEMA recommends that communities self-define what facilities should be designated as critical as part of emergency planning. However, individual programs and grants may have specific eligibility definitions. Typically, these program- and grant-specific considerations would include, but not be limited to, public safety buildings, wastewater and potable water facilities, power plants, cell towers, and other similar facilities. Defining local critical infrastructure and prioritizing designing or otherwise protecting these assets from worsening storm conditions is a significant strategy for increasing regional resilience.

Need

Past disasters like Hurricane Irma disrupted emergency functions and operational status of critical facilities and first responder capabilities, but Hurricane Ian's destructive impact exceeded prior experiences. The *Lee County CDBG-DR Action Plan* summarizes this impact, noting that "The infrastructure systems affected by Hurricane Ian's widespread damage included damage to energy systems, roadways, bridges, traffic controls, water and wastewater treatment systems, septic systems, cell towers, and voice and data services." Many of the highest tier critical infrastructure mitigation efforts, like the Sanibel Causeway, were addressed immediately

Co-Sponsoring Branches:



Stakeholders:

- County and municipal departmental experts on:
 - Public safety
 - Utilities
 - Transportation
 - Solid waste
 - Facilities construction and management
 - Public works
 - Innovation and technology
 - Natural resources
 - Risk management
 - Strategic resources and governmental affairs
- Fire districts
- Police departments
- School District
- Healthcare systems
- Local port authority
- Utilities and internet providers
- Non-for-profit essential service providers

after the storm or have had Hazard Mitigation Grant Program (HMGP) applications submitted to address the need. The *Hurricane Ian After Action Report* – a review of emergency management response to Hurricane Ian focused on identifying recommendations – notes that “Mitigation projects throughout the County increased the resiliency of infrastructure and expedited initial restoration activities following Hurricane Ian’s storm surge and hurricane-force winds.” However, many more critical facilities and systems are still in need of funding for hardening.

Stakeholders identified the most serious challenges to facilities and first responders as water pressure issues that led to fire suppression gaps, potable water supply gaps as well as power generation and transmission failure in the immediate storm aftermath. Problems with roadways and traffic signals also hampered response and recovery efforts. Many businesses had a difficult time getting back to work due to internet connectivity issues. Infrastructure partners define “criticality” differently, based on their unique situations, operating models, and associated risks.

Together the region needs to set priorities for its infrastructure, strategize on identifying funding sources, determine if there are infrastructure sectors that should coordinate more regionally and identify if there were capacity issues in the political subdivisions that would benefit from best practices support from neighboring jurisdictions. These actions also apply to essential services. FEMA’s Community Lifelines toolkit may provide useful guidance for this effort.

Regional Approach

A significant potential benefit of a regional approach to critical infrastructure is that some federal funding is designed to support projects with a cross-jurisdictional, system-focused approach. Together, the region has been compiling and prioritizing critical infrastructure projects to submit for HMGP funding. While this grant will not cover all the gaps, the process of developing the applications has been a collective effort. This approach can be replicated to apply for other federal funds, especially the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program, which has both planning and capital improvement components. The critical infrastructure that needs to be repaired and mitigated requires more resources than are currently being offered with disaster recovery funding from FEMA and HUD.

The municipalities also have a long-standing collaboration with Lee County Public Safety and Florida Gulf Coast University to update the *Joint Local Mitigation Strategy* and the *Hazard Identification and Mitigation Assessment*. The Joint Local Mitigation Strategy “builds resiliency into the communities that make up Lee County and its political subdivisions.” Specific infrastructure sectors, both public and private, can work with Public Safety as they assess response to recent events, and plan and strategize for future hazards, specifically when developing the next version of these documents. While not all infrastructure is considered “critical” as defined by specific programs and grants, community input can inform local priorities and help identify gaps. Overall, continuing to collaborate on infrastructure solutions will likely better resource improvements that serve the residents and visitors to the County.

Impact

A holistic approach to hardening infrastructure is considered a best practice to maintain continuity of government and bring enhanced support of emergency functions immediately following disasters. By working as a region within the relevant infrastructure sectors, there is a better chance to be awarded federal funding because often infrastructure systems are not necessarily isolated within a jurisdiction. Additionally, through this process, some jurisdictions may learn best practices or benefit from capacity support. Strengthening the connection between private infrastructure industry and local Emergency Management may help with developing continuity plans, assisting with preparedness training and exercises, reduce risk, and help the community recover faster by keeping critical infrastructure robust and functioning. Finally, hardening measures will mitigate against future facility damage and could include regular facility maintenance to ensure critical facilities are immediately available for use by first responders and for other critical functions and services post disasters.

Key Considerations

- Critical infrastructure typically includes four main sectors: water, transportation, communication, and energy. Healthcare is considered its own Initiative, but its basic infrastructure should be covered by the main four categories.
- An all-hazards risk management approach will reinforce and highlight what is critical infrastructure.
- Conduct exercises to assess mitigation measures to identify gaps and capacity.
- Encourage Continuity of Operations Planning (COOP) throughout all sectors and the three levels of infrastructure system and services (critical, essential, and necessary).
- Continue to build trusted and sustainable partnerships throughout sectors in the region and formalize relationships as needed with Memorandums of Understanding (MOUs) or other agreements.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network
- IF-005 Fortifying Essential Services and Facilities
- IF-006 Rebuilding Resilient Communications Infrastructure
- IF-007 Augmenting Resilient Energy Infrastructure
- IF-008 Improving Potable Water Delivery
- IF-009 Improving Resilient Wastewater Infrastructure
- NR-002 Flood and Stormwater Management
- ER-003 Building Continuity of Operations for Regional Businesses
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-003 Creating a Mobile Health Clinic System
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

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

Resources

- [Joint Local Mitigation Strategy \(leegov.com\)](#)
- [2022 Hazard Identification and Risk Assessment.pdf \(leegov.com\)](#)
- [Lee County Hurricane Ian AAR.pdf \(leegov.com\)](#)
- [Lee County Final CDBG-DR Action Plan 9.19.2023.pdf \(leegov.com\)](#)

Fortifying Essential Services and Facilities

Identify and safeguard essential service operations post-disaster through new design, relocation, utility redundancy, and system support with prioritization given to the assets at highest risk.

IF-005

Objective:

This Initiative promotes the region-wide identification and designation of essential community services, including identifying the facilities that they rely upon as well as developing pathways for resilience and mitigation infrastructure upgrades. In addition to officially designated critical infrastructure, County governments, communities, and businesses rely on essential services that are key to response and re-establishing everyday life after a disaster.

Hurricane Ian demonstrated that some essential services require more than traditional infrastructure mitigation approaches to remain viable after a disaster. For example, after Hurricane Ian, gas stations were inoperable due to disruptions to internet access needed to make a sale. Bank closures meant that some community members were unable to access money and other financial services after the storm. Lack of access to capital can make staying in a community difficult, even if there are no immediate dangers to life and safety. As part of an essential service identification process, the County can promote the use of a FEMA Community Lifelines framework to help communities better identify dependencies that impede service restoration. Lee County area communities can then consider developing criteria for prioritizing projects that will have the greatest impact on increasing the resilience of these services.

Together, regional stakeholders will strategize on identifying funding sources and identifying opportunities to work across jurisdictions and share best practices or provide technical support.

Co-Sponsoring Branches:



Stakeholders:

- County and municipal departmental experts on:
 - Public safety
 - Utilities
 - Transit
 - Solid waste
 - Facilities construction & management
 - Public works
 - Innovation & technology
 - Natural resources
 - Risk management
 - Parks and recreation
 - Strategic resources & governmental affairs
 - Human & veteran services
- Fire districts
- Police departments
- School District
- Healthcare systems
- Private utilities & internet providers
- Non-for-profit essential service providers

Need

Extreme events like Hurricane Ian cause cascading impacts that reduce the function of essential public services that allow for normal, everyday wellbeing and economic function. The *CDBG-DR Action Plan* recognizes that after Ian, “Community resources were closed, some for many months, due to damage to homeless shelters, domestic violence shelters, the local behavioral health crisis stabilization unit, and libraries.” Having many of these essential services offline for such an extended amount was detrimental to the recovery and caused increased hardship for vulnerable populations. If community members or businesses are unable to access money, healthcare, and beloved community assets, they may be unable or unwilling to stay in the community even if there are no immediate dangers to life and safety.

Not everything that is important for a community can be described as critical, considering the technical definition of “critical infrastructure” under various government programs and grants and the primary mission during emergency response to protect life and safety. Understanding that there is a range of significance is an important step as the region identifies and categorizes facilities and systems into tiers like, critical, essential, and necessary to promote an orderly and thorough recovery. Efforts to support residents with access and functional needs as well as families with members with developmental disabilities like Autism, should be considered a priority in this planning process.

Regional Approach:

Recovering from and preparing for a disaster takes the whole community’s effort; the County essential services are both interdependent and cross jurisdictional. County area communities can utilize the Community Lifelines approach to working with stakeholders to identify essential services and understand how those essential services rely upon areas like power, transportation, and access to water. The identified essential services and/or facilities can then be considered and incorporated into emergency management and community planning initiatives.

When weaknesses are found, some improvements may be able to be covered in local Capital Improvement Plans (CIP), and others may be eligible for funding through Hazard Mitigation Grant Program (HMGP) or through CDBG-DR. Addressing the unmet needs of the County’s infrastructure systems resulting from Hurricane Ian will require a regional approach and coordinated effort.

Key elements of the regional approach to fortifying essential services and facilities could include the following:

- Dividing essential services into separate sectors and assembling a diverse set of key stakeholders, both public and private, across the areas to coordinate and identify which services and systems within those sectors are most important for residents and visitors after a disaster.
- Categorizing supporting services and facilities into three levels (critical, essential, and necessary).
- Promoting assessments of those facilities to determine vulnerability and their current level of resilience, which will help prioritize resilience upgrades.
- Developing guidance for mitigation and hardening by levels that should be achieved and creating an accessible assessment tool that can be used by the facilities.

- Harden existing or develop new resilient facilities that house essential services to ensure they are available during – or shortly after – disasters on the County’s vulnerable barrier islands such as Sanibel, Captiva, Fort Myers Beach, and Pine Island.
- Developing a strategy to relocate (temporarily or permanently) or operationalize redundant essential services that are provided within facilities that cannot be effectively strengthened to withstand identified risks.
- Prioritizing government properties that provide essential services in Capital Improvement Plans.
- Developing a tool to assist facilities in creating their own emergency and continuity of operations plans.
- Developing or identifying financial incentive programs for private and non-governmental organizations to make resilience upgrades to facilities and systems.

While not all infrastructure can be considered critical during crisis, the community can inform the identification of essential services that are important to restoring normalcy after a major event to expedite and complete recovery. Securing resources to perform capital work and manage projects may pose a challenge to some entities, and a collaborative effort may yield more efficient results at scale.

Impact:

By working together in both preparedness and recovery efforts for essential services, the County can realize benefits in blue and gray skies situations. Specifically, by engaging each sector within essential services, leaders will have the value of knowing the community’s capabilities and its needs, as well as an enhanced understanding of local complexities. Building relationships among private and public essential services will strengthen the sectors. These partnerships can determine the most efficient use of scarce resources and prioritize hardening and mitigating facilities to keep essential services functioning for the public.

Key Considerations

- Federal programs like HMGP provide resources to address gaps with critical infrastructure. However, services and assets that are not technically considered “critical” under these programs, are typically eligible for fewer resources; they may need more outside or nontraditional support to fortify.
- Mitigation projects to fortify essential services and facilities may range significantly in scale. As an example, the mitigation needs may be as big as constructing new water and power supply redundancies and as minor as installing hurricane shutters or an elevated generator.
- Continuity of Operations Planning (COOP) for facilities in higher risk locations may include plans to relocate in times of crisis to a partner facility in a lower risk area. Those relationships and agreements should be worked on in advance.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network
- IF-004 Hardening Critical Facilities and Systems

- IF-006 Rebuilding Resilient Communications Infrastructure
- IF-007 Augmenting Resilient Energy Infrastructure
- IF-008 Improving Potable Water Delivery
- IF-009 Improving Resilient Wastewater Infrastructure
- NR-002 Flood and Stormwater Management
- ER-003 Building Continuity of Operations for Regional Businesses
- ER-004 Supporting a Diverse and Resilient Economy
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-003 Creating a Mobile Health Clinic System
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

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

Resources

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

Rebuilding Resilient Communications Infrastructure

Diversify and harden communications infrastructure to enable continued operations, address gaps in communications capabilities, and identify economic areas in need of technology and connectivity advancements to increase resilience. Partner with technology industry experts to implement best practices.

IF-006

Objective

This Initiative promotes rebuilding resilient communications infrastructure in Lee County by diversifying, hardening, protecting, and upgrading infrastructure to enable continued operations and address gaps in communication capabilities before, during, and after disasters using updated technology and connectivity advancements to increase resilience. Understanding how infrastructure resilience contributes to community resilience is a key component to whole community recovery. Evaluating the effectiveness of current emergency communication systems throughout the Lee County region is prudent as recovery continues.

The objective of this Initiative is to mitigate impacts to communication operations across the County, considering immediate post-disaster first responder efforts in particular. This process begins with designing communication towers in County ownership that can withstand extreme weather conditions and incentivizing partner providers to adhere to the same structural standards. Additionally, this Initiative champions innovation through various advancements such as integrating low earth orbit technologies, developing improved and streamlined information sharing platforms, exploring solar power advancements, and cultivating pre-established partnerships amongst all stakeholders.

Co-Sponsoring Branches:



Stakeholders:

- Florida Division of Emergency Management Emergency Support Function (ESF2) and other state partners
- County departmental experts on technology, transportation, communication, economic development, and public safety
- Municipal departmental experts on technology, transportation, communication, economic development, and public safety
- Local police departments/911 operators
- Communications providers
- Utilities and power Providers

Need

Communication services were disrupted throughout Lee County following Hurricane Ian and are critical to future response and recovery efforts. Ian's damages posed immediate challenges to first responder operations regarding life safety including the following:

- Communication provider tower infrastructure was damaged compromising cellular capabilities. County-owned towers are hardened to withstand extreme weather conditions, but that is not always the case within the private sector.
- 911 systems were inundated with calls from Lee County municipalities and neighboring counties that experienced system failures and were diverted to Lee County systems.
- Private partner restoration efforts were not effectively coordinated among interdependent stakeholders until two or three weeks after the storm, providing the County with little oversight to operations and provider priorities. Power restoration efforts need to be coordinated directly in step with communication restoration operations.
- Damage assessments were delayed due to debris removal efforts needed to access communication infrastructure.

Hurricane Ian and its impacts also exposed the existing gap in the availability and reliability of affordable high-speed internet for County residents, especially for the public and the economic sector. Many residents and community members struggled to find real-time information and ways to communicate with others. Accessible internet and ongoing technology training is a vital component of strengthening the workforce and growing the local economy. Reliable and resilient internet service is also becoming more important as retail and commercial systems move to the County or require connectivity for real-time payment processing. Further, increasing cybersecurity can protect the Lee County community from online threats.

Regional Approach

Resilient communications improvement projects within the region and coordination between jurisdictions will address challenges experienced during Hurricane Ian; specific activities can include integrating new communication technologies, instituting the completed broadband gap analysis⁶, increasing cybersecurity defenses, and cultivating partnerships to improve communication. For new technology, a study on how to best leverage Low Earth Orbit (LEO) communications technology can be explored to increase the County posture when redundant services are needed. Studies should include system capacity, projections accounting for population growth, and increased personal use of satellite technologies. Private sector partners can also be leveraged to explore the incorporation of solar technologies in County communication towers to serve as a redundant power source in the event of outages.

Sector leaders can also consider strategic alignment of resources and efforts in cross industry recovery operations. This includes co-locating cell and radio towers in optimal locations with access to restoration resources by conducting scenario-driven impact modeling and convening strategic recovery and response

⁶ Lee County. (2023, December). <https://www.lee.gov.com/broadband>

partners to develop coordination planning. Debris removal, energy restoration, and communication infrastructure repairs are interdependent and should be effectively coordinated.

Improving the current 911 system capabilities can help increase partnerships with neighboring counties within the region. While the 911 system did not fail during and after Hurricane Ian, call capacities were overloaded, and call routing was complicated by impacts to the cellular networks. This was a particular challenge when surrounding counties began relying on Lee County services after their systems failed. Developing pre-scripted messages for additional means of support or guidance on what to do next can also help limit confusion amongst callers. System advancements can also leverage new technologies that record needed information through automation to track calls and ensure residents in need receive required assistance.

As previously noted, damage assessments were difficult to conduct in immediate response operations. Implementing a drone reconnaissance program can help determine and assess structural damage to communications infrastructure post disaster. This strategy should include the formation of a partner group for mission management and information sharing in real time to expedite service restoration operations. Partners should include but are not limited to communication service providers, energy providers, transportation partners, and public safety officials. Predeveloping these relationships can help streamline recovery operations by simplifying the communication/notification chain. This program could be done in coordination with the State Emergency Support Function 2, through the purchase and ownership of County drones, or through predetermined partnerships with private entities.

In addition, carriers, emergency managers, and planners work together to plan and conduct testing for innovative approaches to telecommunications that could help build resilience. Coordinating with state legislators to initiate a call to action that engages carriers to cooperate with fixing communications issues would further enable everyone to work together in an organized fashion.

Developing an information sharing and restoration progress platform accessible by both public and private sector partners can help effectively coordinate efforts and prioritize immediate needs. There are existing platforms and portals that can be enhanced with these features to maintain consistency in previous efforts.

Connecting 911 system software tracking wellness requests with data logged by partners in the field to reduce the influx of calls to 911 systems can also address challenges faced during past response and recovery operations. This approach combines data collected from damage assessors and others who come in contact with impacted community members to avoid duplications of efforts and provide loved ones with accurate and timely information. This approach could be further improved by integration with the State's anticipated launch of a missing and safe persons registry for use during disasters.

The successful institution of information garnered from the broadband gap analysis would provide the region with a plan to undertake capital improvements and specifically assist underserved communities in determining immediate needs.

Cybersecurity for utilities and other infrastructure systems is crucial to maintaining communication for the community and the workforce following disasters. Cybersecurity improvements can also protect government and non-government entities against or mitigate the negative impact of cyber-attacks and data breaches. This regional approach will better equip the community with a plan of action to augment communication

infrastructure that will support all members of the community. Strengthening communications infrastructure across the County would decrease service disruptions and contribute to the more rapid resumption of services when issues occur.

Impact

Implementing these strategies and tactics will help the County protect lives, enhance recovery progress, and mitigate overall disruptions to communications. Stakeholder collaboration and coordination will help the County better withstand impacts from future disasters including the following potential positive outcomes:

- Physical communication infrastructure would be more resistant to impacts;
- First responders would benefit from additional redundancies for their communication capabilities;
- 911 systems would be able to better manage the influx of calls; and
- Providers and other stakeholders would be able to communicate and better coordinate restoration efforts with improved County visibility.

Key Considerations

- Conduct periodic system testing to ensure all services are operational and no additional maintenance is needed.
- Create digital literacy programs that focus on areas where internet access is or was previously limited.
- Initiate a proof-of-concept project for solar powered cell towers.
- Evaluate use of apps for communication of vital information, prioritize information---“marked safe”, or linked systems for wellness check repository.
- Consider developing redundant outreach and communication strategies that reach communities through points of contact e.g. libraries, community centers, schools, religious institutions, etc.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- PC-004 Supporting Regional Disaster Debris Management
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- HG-001 Supporting Regional Housing Coordination
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-003 Building Continuity of Operations for Regional Businesses
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- United States Department of Homeland Security
- United States Department of State
- National Rural Telecommunications Cooperative – Florida Broadband Opportunity Grant Program
- Cybersecurity and Infrastructure Security Agency
- United States Department of Energy
- National Telecommunications and Information Administration
- National Institute of Standards and Technology
- United States Department of Agriculture
- Federal Communications Commission
- Resilient Cities Network – Resilient Community Impact Funds
- Internet For All
- Florida Commerce – Broadband Opportunity Program
- Florida Digital Service
- Florida State Broadband Office

Resources

- [Evaluating Local Broadband Capabilities \(leegov.com\)](http://leegov.com)

Augmenting Resilient Energy Infrastructure

Work across sectors to improve the resilience and reliability of energy infrastructure to reduce power outages and operating costs.

IF-007

Objective

Prioritizing resilient energy infrastructure projects and employing new technologies and mechanics is vital to supporting safe and reliable restoration and production of power following disruption.

At the height of Hurricane Ian's landfall in Southwest Florida, approximately 2.7 million households were without power, primarily due to issues with neighborhood distribution. Major high-tension and distribution lines sustained little damage and were available after initial inspections. One possible priority project is employing new technologies through infrastructure hardening – which proved successful in several locations following Ian's landfall.⁷ Different communities require different approaches. The County can produce an updated, cross-jurisdictional view of energy resilience priorities, utilizing past disaster experiences and modeling. Additionally, stakeholders can work across sectors and continuously identify funding gaps and explore pathways to achieving priority work as recovery funding allows projects to be initiated.

Safeguarding can be achieved in some locations through burying power lines underground where they are less vulnerable to high winds, strengthening poles with concrete, and implementing other inventive hardening solutions. Increasing local generation, such as hardened waste-to-energy facilities could also increase local energy resiliency. County waste-to-energy facilities were operating within 48 hours after Ian's landfall. However, this option may not always be a solution where saltwater corrosion is a concern.

Co-Sponsoring Branches:



Stakeholders:

- Municipal departmental experts on public safety
- County departmental experts on public safety
- Utilities and power providers
- Local port authority

⁷ Taylor, A. (2022, October 16). Most Floridians got power back quickly after Ian but for some the wait has just begun. <https://www.washingtonpost.com/nation/2022/10/14/hurricane-ian-power-outages/>

Additional projects and opportunities may include aligning planning and mitigation priorities at the local and regional levels, increasing coordination through permitting and easements, and mapping vulnerabilities and critical infrastructure. Using solar or other forms of renewable energy may also further build resilience in the energy grid, which could improve and shorten restoration and recovery times.

Need

Resilient energy infrastructure supports the safe and reliable production of power for residents and businesses to use in their daily lives. Reliable power is also necessary for vital emergency service functions and life-safety operations. Though a full analysis is ongoing by both Florida Power and Light (FPL) and the Lee County Electric Cooperative (LCEC), early reports indicate the area's power grid benefitted from recent investments in resilience and performed better than when compared with past disasters. Florida Power and Light and Lee County Electric Cooperative recognize the improved coordination for restoration staging areas and additional logistics, planning and response needs through the County Emergency Operations Center since Irma (2017)⁸. Additionally, both electric service companies have been prioritizing hardening projects and mitigation projects over the past few years. FPL has integrated pilot projects (most recently, the Storm Secure Underground Program) and implemented smart grid technologies to be better equipped to respond and restore electricity. Continued challenges occur with the impacts of saltwater intrusion from coastal flooding, erosion and storm surge, and supply chain delays and disruptions. Substations in floodplains sustained the most severe damage and require the greatest amount of money to restore. These substations would therefore benefit greatly from collaborative efforts to implement resilient solutions.

Funding grid resilience projects is not always straightforward and can lead to concerns of increased rates for those receiving power. Additionally, grant programs are often competitive and include a strategic ranking system that does not always lead to high rankings for certain innovative projects. Electric service and power providers and regional, County, and local officials can seek to collaborate on developing plans (e.g., mitigation plans and strategies, City and County Comprehensive Plans, and local planning/development plans) as well as mapping critical infrastructure to ensure maximum points can be obtained in grant project applications. Collaboration can also integrate grid sustainability and transmission and distribution resilience as part of broader development and recovery/resilience strategies.

There are also some Lee County neighborhoods that experience frequent power outages, and often lag other areas in service restoration. Efforts should be made to identify these areas and develop solutions. Clean and renewable energy options should be considered.

Regional Approach

The nature of the challenges to supply chain and the need for coordination in planning, mapping critical infrastructure, and assessing vulnerabilities will require a greater collaboration between power generators, distributors, partners, and stakeholders. FPL determined that underground power lines performed five times

⁸ Lee County Electric Cooperative (2023, December). How LCEC prepares. <https://www.lcec.net/reliability/storm-center/how-lcec-prepares>

better than overhead lines during Hurricane Ian⁹. In some areas where power lines must stay overhead, other hardening measures can occur like using stronger poles. Undergrounding efforts must be comprehensive to promote the best outcomes. Implementing solutions will also require access to a variety of funding solutions, some of which include competitive grant programs and may be positioned to support regionally developed and supported projects related to critical infrastructure.

The region will work to bolster resilience and expedite the restoration of power to the community in the following ways:

- Hardening or retrofitting existing infrastructure and collaborating or supporting grant and loan applications for hardening and innovative mitigation solutions.
 - Focus areas for grants may include substation mitigation projects (e.g., raising the substation or implementing innovative manufacturing components) or developing new or expanding upon successful pilot projects.
- Upgrading and relocating service centers in service territories.
- Undergrounding lines where possible and feasible.
- Assistance with the permitting process, including permitting for acquisitional land and restricted properties.
- Increased pre-storm planning coordination, including assistance with easement acquisitions (incorporating easements into plan updates).
- Diversifying the production of energy and developing/expanding redundancies such as solar battery storage banking in strategic areas.
- Utilizing microgrid technologies for reliable production as a high priority.

Impact

Prioritizing electric infrastructure mitigation and resilience projects around critical infrastructure and prioritizing areas for local and regional coordination will support both long-term resilience goals and short-term recovery goals. Strengthening and hardening the existing energy infrastructure through prioritizing strategies like undergrounding power lines, elevating substations, and funding innovative solutions will be an effective way to meet recovery and resilience goals. However, to make the most impact, it is vital to look at alternative ways to improve and secure the overall energy infrastructure by using clean and renewable energy sources that can withstand catastrophic events such as hurricanes and flooding. Meeting this objective will involve implementing a diversity of strategies.

Key Considerations

- Compile a comprehensive list of current energy usage and maintenance of facilities.
- Assess energy needs and incorporating how improvements can be made to the current energy sources.

⁹ Florida Power and Light Newsroom (2023, January 13) FPL earns top industry honors for rapid response during hurricane Ian. <https://newsroom.fpl.com/FPL-earns-top-industry-honors-for-rapid-response-during-Hurricane-Ian#:~:text=FPL%20earns%20top%20industry%20honors%20for%20rapid%20response%20during%20Hurricane%20Ian,-January%2013%2C%202023&text=JUNO%20BEACH%2C%20Fla.,restoration%20efforts%20following%20Hurricane%20Ian.>

- Prioritize projects based on the most pressing needs found in the assessment.
- Utility redundancy for critical infrastructure such as the airports should be considered in future COOP.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- HG-001 Supporting Regional Housing Coordination
- HG-006 Promoting Housing Development Programs
- ER-003 Building Continuity of Operations for Regional Businesses
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services

Funding Sources

- United States Department of Energy
- United States Department of Agriculture
- United States Department of Housing and Urban Development
- Florida Department of Agriculture and Consumer Services
- Florida Public Utilities
- Enterprise Florida
- Duke Energy Foundation

Improving Potable Water Delivery

Improve the capability of potable water delivery infrastructure and distribution systems.

IF-008

Objective

Enhance the resilience of potable water infrastructure in Lee County to provide reliable and safe drinking water to the community in non-disaster times and during and after catastrophic events and meet the demand of a growing population. In addition to the expansion and hardening of potable water infrastructure to withstand future disasters, resilient and redundant potable systems for essential facilities are critical.

Need

In the aftermath of Hurricane Ian, a badly damaged water system affected a large portion of the County population, forcing community members to search for water using creative solutions. Conservation of water and reliance on outside sources for potable water are short-term solutions during disasters. Improving potable water services, including the construction and installation of resilient and redundant water delivery and distribution systems is necessary to provide safe drinking water to the community over the long-term. It is necessary to harden the existing infrastructure, considering a focus on service continuity and enhanced maintenance standards to build a resilient and redundant system.

Regional Approach

The Lee County region can coordinate a variety of resilient actions to improve system reliability and continuity of service; These strategies for potable water delivery require actions by specific jurisdictions and by multiple nonprofit and for-profit entities that own the existing infrastructure. Constructing redundancy by

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts on public works and utilities
- Municipal departmental experts on public works and utilities
- Utility providers
- Community development districts and other special districts providing utility services

creating backup systems and pathways, raw water wells, and sufficient water storage should be built and maintained to provide adequate, reliable, and safe drinking water for residents. The interconnection between various regional water utilities should be seamless, efficient, redundant, and coordinated by enabling mutual support and resource sharing when needed. In addition to required backup generator power, other considerations for improving potable water infrastructure include the enhancement of system monitoring, consolidation of boil water notices, and efficient water sampling. Field power backup for wellfields including backup generators is also necessary so water can be drawn into the system. However, because typical generators cannot run 24 hours a day, resilient and redundant power sources are important. Lee County has a system for remote monitoring in place, but since it does not cover the entire county, updated system monitoring to isolate and identify issues in the entire system should be implemented.

Impact

The outcome of pursuing these system upgrades is a potable water infrastructure system that remains resilient and capable of providing uninterrupted access to safe drinking water for communities, even in the aftermath of catastrophic events. Coordination of resilient regional actions to improve system reliability and capacity includes expansion of existing potable water systems, increasing capacity to keep up with growing service demand, preserving and hardening facilities to protect from hazards, integrating resilient and redundant systems at critical facilities, and interconnecting systems. Interconnects are also important to provide resilient and redundant potable water systems, so evaluation of current interconnects and addition of more interconnects in the County is crucial to achieve redundancy. It is vital to harden the current potable water systems to provide water quality sources to the community before, during, and after disasters.

Key Considerations

- Create a comprehensive list of current potable water infrastructure and key stakeholders.
- Utilize the *Public Facilities Level of Service and Concurrency Report* that is completed annually to identify adherence standards for current and future potable water infrastructure needs and prioritize potable water projects based on the study, keeping the community involved with feedback opportunities.¹⁰
- Focus on service continuity and standard of maintenance.

Related Initiatives

- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- HG-001 Supporting Regional Housing Coordination
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-003 Building Continuity of Operations for Regional Businesses

¹⁰ Lee County Southwest Florida, (2022). <https://www.leegov.com/dcd/studiesandreports/concurrencyreports>

- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services

Funding Sources

- United States Environmental Protection Agency
- United States Department of Agriculture
- Centers for Disease Control and Prevention
- The Administration for Children and Families
- Florida Rural Water Association
- Florida Department of Environmental Protection
- Protecting Florida Together
- South Florida Water Management District

Improving Resilient Wastewater Infrastructure

Improve the operational capability of wastewater infrastructure and increase the speed of septic-to-sewer conversions where possible.

IF-009

Objective

Promote the fortification of sanitary sewer infrastructure and prevent disruptions and overflows, particularly during and after catastrophic events like Hurricane Ian. Enhancing the reliability of the wastewater systems and avoiding sanitary sewer overflows is crucial to safeguarding public and environmental health, enhancing community safety, and providing uninterrupted continuity of service. There are significant environmental impacts from sewage spills that cause harmful bacteria to infect the water system. It is essential to develop advanced wastewater treatment methods to improve water quality and remove harmful nutrients, bacteria, and other pollutants. The potential harmful impacts of extreme storm events underscore the critical need for redundancy and the avoidance of wastewater system service disruptions.

Need

Improving the operational capacity of wastewater systems, including the construction and installation of resilient wastewater infrastructure such as septic-to-sewer conversions for households, is crucial to protecting people and the environment. The rehabilitation and construction of reclamation facilities, lift stations, and redundant connections between systems, and hardened and resilient wastewater infrastructure is a critical need in the region.

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts on natural resources, utilities, and public works
- Municipal departmental experts on natural resources, utilities, and public works
- Utility providers
- Community development districts and other special districts providing utility services

Regional Approach

Coordinated expansion actions can be implemented for wastewater infrastructure by focusing on goals that strengthen and prevent disruptions for all Lee County jurisdictions. Redundancy can be increased through developing backup systems and connections to minimize the risk of service interruptions and overflows including backup generator power. By leveraging advancing technologies, enhanced monitoring systems and early warning systems can be employed to detect potential issues, address them proactively, and reduce the risk of service disruptions.

Local governments and utility providers have a critical role in the delivery of services and in establishing and implementing emergency response protocols and resources to swiftly address any disruptions or overflows. Jurisdictions should work with the County or utility provider to implement advancing technology and accelerating the use of reclaimed water. For example, the Village of Estero uses reclaimed water derived from wastewater that can then be used for irrigation purposes, providing a beneficial use of the County's wastewater. Septic-to-sewer conversions prevent spillage and runoff from tidal, flood, and storm-related surge from impacting water quality. Sewer collection systems are more effective at removing pathogens than septic systems and preventing nutrient pollution from the system into waterbodies and ultimately protecting ecosystems. A wastewater treatment framework should be developed to assist with future events. Prioritizing utility projects requires coordination and implementation of the following resilient actions to support resilient wastewater infrastructure:

- Increase capacity of existing wastewater treatment facilities;
- Harden wastewater facilities to protect systems from hazards;
- Construct additional facilities to increase capacity;
- Install deepwater injection wells;
- Increase redundancies and collaboration between utilities;
- Enhance redundant power and communications infrastructure;
- Understand potential breaches and leaks ahead of disasters; and
- Prioritize completion of septic-to-sewer conversions for homes that utilize septic in environmentally sensitive areas including low lying, coastal, and riverine floodplains.

Impact

By focusing on these critical measures, wastewater infrastructure will be strengthened, disruptions prevented, and sanitary sewer overflows avoided. This not only enhances the seamless delivery of essential services but also plays a pivotal role in safeguarding public and environmental health, community safety, and the uninterrupted continuity of service, even amidst rapid growth and challenging circumstances.

Key Considerations

- Assessment of countywide wastewater infrastructure facilities.

- Prioritized list of wastewater improvement projects with criteria based on lessons learned during Hurricane Ian.
- Development of a countywide map of wastewater infrastructure facilities, prioritizing healthcare facilities, resiliency hubs, shelters, and other structures with critical and essential services.
- Create an outreach process for community involvement to keep the community engaged and incorporate their feedback.
- Identify properties to be converted or any upgrades that need to occur to existing infrastructure and barriers or impediments.
- Create backup power for pumping stations.
- Incentivize and promote advanced wastewater treatment using the regulations already in place in the BMAPs.

Related Initiatives

- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- HG-001 Supporting Regional Housing Coordination
- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach
- HG-003 Expanding Housing Financing and Legal Service Programs
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-003 Building Continuity of Operations for Regional Businesses
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services

Funding Sources

- United States Environmental Protection Agency
- United States Department of Agriculture
- United States Bureau of Reclamation
- United States Army Corps of Engineers
- Florida Department of Environmental Protection
- Florida Department of Economic Opportunity
- Department of Commerce – Economic Development Administration
- National Rural Water Association
- Florida Rural Water Association
- Rural Community Assistance Partnership
- South Florida Water Management District
- Southwest Florida Water Management District

Resources

- Study completed by Lee County Utilities

Building Back More Resilient Working Waterfronts

Rehabilitate support structures over and adjacent to the water such as seawalls, docks, marinas, and other watercraft supporting infrastructure to establish working waterfronts where appropriate.

IF-010

Objective

The region's seawalls, docks, mooring fields, harbors, and marinas are key to supporting local businesses and are a part of the way of life for many Lee County area residents. Bringing access to coastal waters back is important for the fishing and boating industries and would create a chance to develop stronger flood water management features with resilience to sea level rise. Resilient waterfront facilities can reduce risks of coastal flooding, mitigate future impacts, improve access to navigable waters, and provide opportunities for businesses that rely on sustainable access. Inland marinas upstream from the Franklin Lock can also provide opportunities for evacuation planning of vessels in coastal areas, creating partnerships with those inland marinas to allow vessels to have slips there in times of crisis. Working waterfronts, both along the coastline and rivers, can be designed for specific commercial, recreational, public safety, or industrial uses to meet the needs of the region.

Need

Hurricane Ian produced catastrophic storm surge that impacted the coastal region of Lee County bringing 10 to 15 ft of storm surge in portions of Fort Myers Beach. The widespread storm surge reversed the flow of rivers causing flooding miles inland, destroying public and private marinas, and grounding 43 vessels of the Fort Myers Beach shrimping fleet. The shrimping industry has a \$50 million annual economic impact considering much of its income is spent

Co-Sponsoring Branches:



Stakeholders:

- County and municipal departmental experts on:
 - Public safety
 - Utilities
 - Transit
 - Solid waste
 - Facilities construction and management
 - Public works
 - Innovation and technology
 - Natural resources
 - Risk management
 - Parks and recreation
 - Strategic resources and governmental affairs
 - Human and veteran services
- Fire districts
- Police departments
- School District
- Healthcare systems
- Private utilities and Internet providers
- Non-for-profit essential service providers

locally, which supports other businesses.¹¹ Fishing is considered second, only to tourism on Fort Myers Beach. While most vessels in the shrimping fleet have been refloated, the infrastructure to support the shrimping fleet was severely damaged on San Carlos Island in unincorporated Lee County.

In addition, Hurricane Ian damaged several bridges, severing the link between the mainland and the barrier islands of Sanibel, Captiva, and Pine Island. The connectivity to the coastal islands was lost temporarily and significant shifts in the topography of waterways created initial challenges to reach the islands by boat. After establishing a navigable channel, barges were used to transport equipment, supplies, and personnel to begin the response efforts on the islands. Permanent facilities for barge operations must be developed for each island in the event of a disaster or any event that disrupts vehicular access across bridges that are singular access points to the barrier islands. During the State's debris removal mission, seawalls within the City of Fort Myers were left damaged and further compromised, and more robust waterfronts may have been able to accommodate the water debris mission. Damage to waterfronts can also be result of response and recovery efforts, not just from direct impacts from Hurricane Ian.

Regional Approach

Jurisdictions can address vulnerabilities to critical infrastructure and incorporate a variety of measures to reduce flood risks for new waterfront infrastructure. Historically, water-adjacent areas were identified for their strategic importance as marine infrastructure in *The Lee Plan* with the water-dependent overlay that shows specific policies and development concerns. A key strategy going forward will be to establish design standards for working waterfronts to be resilient to flood risk and sea level rise. Resilience through adaptation and mitigation efforts can reduce adverse impacts from severe rainfall events, coastal flooding, storm surge from more frequent and severe weather systems, and sea level rise. A key public safety consideration is establishing barge access points (assessing the need for each island individually) since road connectivity cannot be guaranteed following a storm surge event.

Impact

The recovery from Hurricane Ian provides the region an opportunity to inventory public and private marinas, seawalls, boat ramps, mooring fields, and assess if additional facilities are needed. As waterfronts are repaired and rebuilt, there is an opportunity to reimagine new ways to provide access and economic opportunity with respect to natural resources. Working waterfronts designed for specific commercial, industrial, or recreational use can revitalize the shrimping, boating, and fishing industries in the County. Incorporating design standards for a resilient waterfront infrastructure that retains the historic character of a community will support a unified approach on resilience standards. Preparing and developing barge landing facilities allows for effective response to future storms and threats of flooding.

¹¹ Aten, Tim. (2023, January 1) "Hurricane Ian remains lingering threat to SWFL's commercial fishing industry." Gulfshore Business. <https://www.gulfshorebusiness.com/hurricane-ian-remains-lingering-threat-to-swfls-commercial-fishing-industry/#:~:text=Hurricane%20Ian%20had%20a%20devastating,destruction%20of%20waterways%20and%20infrastructure>

Key Considerations

- Areas of possible improvements include the following:
 - Reconstruction of seawalls along working waterfronts and other publicly owned or maintained lands;
 - Mooring field improvements;
 - Identify regional locations for developing of barge landing facilities;
 - Construct barge landing facilities that are vital for response efforts and maintaining supply lines to barrier islands; and
 - Marinas and docks built to withstand risks from coastal flooding and sea level rise.
- Design standards should consider both past stormwater and ocean surge experience as well as modeling of future conditions.
- The use of green, living shorelines may be appropriate in some areas. Some areas may benefit from the use of rip rap and living shorelines to improve resiliency.

Related Initiatives

- PC-004 Supporting Regional Disaster Debris Management
- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network
- IF-002 Improving Evacuation Preparedness
- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- NR-001 Protecting Coastal and Natural Buffers
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration
- NR-005 Coordinating Regional Land Acquisition and Management
- NR-006 Reviving Public Recreation
- HG-004 Identifying Buyout Opportunities
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-004 Supporting a Diverse and Resilient Economy

Funding Sources

- Federal Emergency Management Agency
- United States Department of Transportation
- United States Department of Health and Human Services
- United States Department of Energy
- United States Department of Housing and Urban Development
- United States Department of Agriculture
- United States Department of the Interior
- United States Environmental Protection Agency

- United States Army Corp of Engineers
- United States Economic Development Administration
- United States Small Business Administration
- National Oceanic and Atmospheric Administration
- Federal Transit Administration
- Federal Highway Administration
- Florida Division of Emergency Management

Resources

- [Joint Local Mitigation Strategy \(leegov.com\)](#)
- [2022 Hazard Identification and Risk Assessment.pdf \(leegov.com\)](#)
- [Lee County Hurricane Ian AAR.pdf \(leegov.com\)](#)
- [Lee County Final CDBG-DR Action Plan 9.19.2023.pdf \(leegov.com\)](#)



NATURAL RESOURCES

Initiatives



Protecting Coastal and Natural Buffers

Restore and protect coastal resources such as mangrove forests and saltwater wetlands that serve as natural buffers and storm protection along the coastline.

NR-001

Objective

This Initiative describes activities to restore and protect coastal ecosystems (i.e., habitats where land and tidal water meet) and the unique benefits they provide in mitigating the risk of damage from coastal erosion and storm surge to County residents and infrastructure. Mangrove forests, saltwater wetlands, and barrier islands, including beaches and dunes, are some of the coastal resources in the County that can contribute to significantly lowering the risk of erosion and storm damage. Mangroves are a unique coastal tree or shrub that can grow in saline or brackish water. Their complex root systems form a lattice structure that traps sediment, provides protection from wave action and is a biodiverse habitat including many fish and shellfish species. This natural coastal protection can eventually lead to the formation of mangrove islands, which are natural buffers that can absorb the effects of coastal flooding.

Beaches are an important part of the environment, economy, and culture of the County. The stabilization of shorelines can be accomplished through erosion control structures and nature-based solutions. Nature-based solutions such as mangrove planting, beach nourishment, and dune restoration are often preferred to coastal armaments such as seawalls, which can have negative impacts on erosion.

Need

Coastal resources were severely impacted due to Hurricane Ian and require ongoing maintenance. Unfortunately, approximately 22.8 miles of the 47 miles of Gulf beaches in Lee County experience

Co-Sponsoring Branches:



Stakeholders:

- U.S. Fish and Wildlife Service (J.N. Ding Darling National Wildlife Refuge)
- South Florida Water Management District
- Florida Department of Environmental Protection
- Florida Fish and Wildlife Conservation Commission
- County departmental experts on natural resources, parks, and planning
- Municipal departmental experts on natural resources, parks, and planning
- University partnerships

critical erosion.¹² As natural components of the surrounding barrier islands, beaches bore the brunt of the storm-induced wave action from Hurricane Ian. Coastal Lee County experienced storm surge, with catastrophic levels of 10 to 15 ft above ground level on Fort Myers Beach and eastern Sanibel Island.¹³ The receding flood waters left scoured beaches and damaged infrastructure. Forty-six of the 47 miles of beachfront shoreline experienced some erosion with 35 miles categorized as major.¹⁴ Due to storm surge, upland habitats; freshwater rivers, lakes, and ponds; and mangrove forests were inundated with saline flood waters riddled with debris, severely impacting natural resources. Areas of the County are classified as a Coastal High Hazard or Special Flood Hazard Area along the coasts that are exposed to additional hazards due to wind and wave action. These areas are identified on Flood Insurance Rate Maps (FIRMs) as zones V. Natural areas of mangroves or vegetated dunes can serve as buffers and lower the potential risk from storm surge flooding and erosion due to wave action in these higher risk zones. Barrier islands and mangrove forests in part helped to mitigate the effects of storm surge from Hurricane Ian in the County and will continue to provide risk mitigation to future events.

Shoreline stabilization efforts need innovative and impactful investments to increase community resilience in multiple sectors. Due to the relationship between tourism, native wildlife, and beaches, wide sandy beaches with native dune vegetation, which is a softer approach to stabilization, is preferred to hard infrastructure approaches that can diminish the use of the beach by coastal wildlife (such as shorebirds and sea turtles) and do not allow for recreation. The establishment of living shorelines is also a proven method to lessen the impact of storm surge and absorbing, rather than deflecting, wave energy. Lessening the impacts of storm surge and rising sea levels will help the economy and critical infrastructure in addition to the natural resources.

Regional Approach

The regional approach to protecting coastal resources will include mapping critical areas along the coastline that should be protected or restored over time through public project implementation, development controls, or strategic land acquisition. Utilizing mapping tools, coastal communities can emphasize the need to restore natural areas, including those areas already owned by local governments, that serve as natural barriers for coastal flooding. Nature-based solutions can also provide environmental, economic, and social benefits when coastal wetlands and habitats are restored.

Additionally, increased regional collaboration will help bolster current efforts to protect beaches and shorelines. The Coastal Advisory Council helped define management policies for critically eroded beaches in the County. Plans are developed and implemented cooperatively including federal, state, and local resources.

¹² Clark, Ralph, and Guy Weeks. (2023, July). Critically eroded beaches in Florida. Florida Department of Environmental Protection. <https://floridadep.gov/rcp/coastal-engineering-geology/documents/critically-eroded-beaches-florida>

¹³ National Oceanic and Atmospheric Administration (NOAA). (2022, September). National hurricane center tropical cyclone report: hurricane Ian (AL092022). https://www.nhc.noaa.gov/data/tcr/AL092022_Ian.pdf

¹⁴ Florida Department of Environmental Protection, Office of Resilience and Coastal Protection. (2023, August) Hurricane Ian and hurricane Nicole post-storm beach conditions and coastal impact report. https://floridadep.gov/sites/default/files/Hurricane%20Ian%20%26%20Nicole_Final%20Report_Aug.%202023.pdf

Natural buffers require actions that both protect against and help adapt to rising water levels from storm surge and rising sea levels. To implement this Initiative, local comprehensive plans and land development codes can include policies that promote preservation or restoration of the coastline through incentives or regulation.

Impact

The outcome impact of this Initiative will be increased protection of coastal communities from hazards such as erosion, storm surge, and coastal flooding. Moving forward, the region can work to improve resilience to storm surge and sea level rise by acquiring, maintaining, and/or committing to the protection and restoration of mangroves, beach and dune systems, and other natural buffers. Barrier islands protect the mainland as well as lagoons, wetlands, and salt marshes from the impact of natural hazards including storm surge. The revival and protection of these natural buffers can build coastal resilience to future events, particularly to hurricanes that cause storm surge and coastal flooding. Ultimately, protecting these natural buffers also maintains the biodiversity and the integrity of the ecosystem. This in turn makes the marine life and the fishing industry healthier and provides nesting, resting, and food sites for a variety of species including sea turtles and native and migratory birds. Nature-based recreational activities like birding, shelling, and wildlife viewing are enjoyed by residents and tourists alike.

Key Considerations

Consider and develop policy recommendations that emphasize the acquisition, protection, or restoration of natural buffers including but not limited to:

- Mangrove forests;
- Wetlands;
- Dunes; and
- Living shorelines.

Related Initiatives

- PC-004 Supporting Regional Disaster Debris Management
- IF-010 Building Back More Resilient Working Waterfronts
- NR-002 Flood and Stormwater Management
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration
- NR-005 Coordinating Regional Land Acquisition and Management
- NR-006 Reviving Public Recreation
- HG-004 Identifying Buyout Opportunities
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities

Funding Sources

- National Oceanic and Atmospheric Administration
- Environmental Protection Agency
- United States Department of the Interior
- Federal Emergency Management Agency
- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- The Land and Water Conservation Fund Coalition
- Florida Department of Environmental Protection
- Florida Division of Emergency Management
- Florida Fish and Wildlife Conservation Commission
- National Audubon Society

Flood and Stormwater Management

Improve the capacity of stormwater infrastructure to reduce the impact of flooding and improve environmental outcomes on a regional scale.

NR-002

Objective

The objective of this Initiative is to improve the capacity of stormwater infrastructure using nature-based solutions that improve environmental outcomes, mitigate risk of water intrusion in homes, and reduce the risk of flooding across the region. Stormwater infrastructure includes open green spaces, waterscapes, swales, flow ways, culverts, and canals that contribute to the capacity of the system to effectively convey water off the land and into waterways. Effective stormwater conveyance includes traditional gray infrastructure such as pipes, culverts, or other concrete design features as well as green infrastructure techniques that mimic nature and involve the use of soils for percolation and vegetation for infiltration, evapotranspiration, and/or recycling of stormwater runoff.¹⁵ When these nature-based solutions are incorporated into the built environment, it is referred to as a “living with water” approach. Managing water is an inherently regional, watershed-based process. A watershed (also called a drainage basin and catchment) is a land area that directs water flow that consists of all forms of precipitation to smaller bodies of water, such as creeks, streams, and rivers that outflow to a common, larger body of water; in the County, water outflows to the Caloosahatchee River, Charlotte Harbor Estuary, Estero Bay, and the Gulf of Mexico.¹⁶

Co-Sponsoring Branches:



Stakeholders:

- United States Army Corps of Engineers
- South Florida Water Management District
- Florida Department of Environmental Protection
- Lee County departmental experts on natural resources, parks, and transportation.
- Municipal departmental experts on natural resources, parks, and transportation
- University partnerships

¹⁵ NRDC. (2022, July 25). Green infrastructure: how to manage water in a sustainable way. <https://www.nrdc.org/stories/green-infrastructure-how-manage-water-sustainable-way#whatis>

¹⁶ National Ocean Service. (n.d). National Oceanic and Atmospheric Administration (NOAA). What is a watershed? <https://oceanservice.noaa.gov/facts/watershed.html>

Need

Stormwater management at a regional level is necessary to mitigate flood risk from heavy rain events, king tides, sea level rise, and tropical activity, in an increasingly urbanized, developed County. The County has relatively flat topography and high amounts of rainfall, which are typical of Southwest Florida. In 2017, two storms, Invest 92L and Hurricane Irma, precipitated 15" - 30" of rain in the County within 20 days. These two significant rainfall events caused major downstream flooding and became the impetus for the commission of a study that became known as the *Southern Lee County Flood Mitigation Plan* (SLCFMP).

When stormwater systems are unable to effectively flow, surface water is unable to drain properly and can flood low-lying areas. Flooding can threaten safety as well as damage infrastructure and the natural environment. Land use changes in the County because of development may impact the hydrology of the region by decreasing the available ground surface over which water can infiltrate and by decreasing the time it takes for water to reach the discharge point in a watershed. Impervious surfaces such as roads do not allow water to infiltrate and create additional drainage challenges in developed areas.

The region has an extensive and complex system of canals that provides residents with waterfront property and access to natural resources; the City of Cape Coral, for example, has over 400 miles of canals, and Lehigh Acres has a network of over 300 miles. These canals are primarily a system for water control. The maintenance of flow ways and canals considers the effective flow of water, removing obstructions such as vegetative debris or sediment that restricts flow. A well-developed maintenance plan will increase the longevity of the drainage facilities and will allow for maximum conveyance during storm events.

This Initiative stands to reduce the loss of life, property, and environmental impacts in respect to the strong forces of nature. Focusing on mitigating overall impacts in plans, developments, and direct improvement actions throughout the region is critical to strengthening resilience.

Regional Approach

The flow of water does not consider jurisdictional boundaries; a regional approach to reducing flood risk through improved stormwater management requires coordinated implementation of infrastructure maintenance, planning, and construction. Watershed issues in one jurisdiction can have downstream effects on others. A key strategy to reduce flood risk is for each jurisdiction to maintain individual flow ways by adhering to a regional standard of maintenance and clearing vegetative debris where necessary to maintain adequate flow of water. Direct actions should also consider floods of all types. The causes of flooding are not limited to tropical systems and may include traditional rain/weather, sea level rise, and tidal flooding.

Stormwater projects must be completed in a strategic order so as not to inadvertently cause new issues in another area of the watershed. A prerequisite of some of the upstream projects is that downstream improvements (such as maintaining flow ways) must occur first so that flooding problems are not transferred from one area to another.

Regional planning would also support the incorporation of other considerations, such as prioritizing improvements along evacuation and collector routes to maintain safe transit. Similarly, the planning and

design of stormwater criteria is informed using complex regional models. The SLCFMP analyzed four regional watersheds and developed conceptual projects to mitigate flooding challenges in the South Lee County area, which includes Unincorporated Lee County, the Village of Estero, the City of Bonita Springs, and portions of the City of Fort Myers. Note that Cape Coral was not included in this modeling and may need a watershed analysis for a complete picture of the region. These projects could increase the effectiveness of stormwater infrastructure through bypass, structure replacement, increased storage, and improved conveyance. The implementation of these direct actions provides the region with a strategic model for how to mitigate flood risk.

It is important for local leaders to plan and collaborate with the South Florida Water Management District for flood control levels of service in the County to increase overall resilience. Coordination between the South Florida Water Management District, Lee County, municipalities, and water control districts could allow jurisdictions to jointly pursue funding to complete the larger, regional, and more expensive projects. The BRIC, FMA, HMGP, and some EPA, USDA, and state water programs (e.g., Resilient Florida) are just some of the funding sources that consider regionalism and/or partnerships in the selection process.

Impact

The region can improve stormwater capacity and reduce the impacts of flooding through a standard of maintenance for flow ways, coordinated direct actions to increase conveyance, and strategic planning and resourcing. Resilient stormwater infrastructure reduces the negative impacts from flooding on the built environment, as well as the secondary results of flooding (e.g., loss of economic activity).

Key Considerations

- Implement the prioritized conceptual projects from the Southern Lee County Flood Mitigation Plan, especially those with the greatest potential impact. Projects were evaluated individually and as a system for flood mitigation benefits to the region.
- Cape Coral is outside of the SLCFMP watershed boundaries. The City of Cape Coral should consider a comparable full analysis of regional watersheds to identify projects based on the same criteria. The following criteria were considered for the prioritization of projects:
 - Cost and Flood Mitigation Benefit - Lower cost projects with higher flood mitigation benefits were ranked higher;
 - Existing Drainage Level of Service - Represents current drainage and areas that have historically shown significant flooding;
 - Multiple Benefits - Projects often have more than one flood mitigation benefit;
 - Land Availability - Land acquisition costs were considered, and projects on lands that were already publicly owned were given a higher priority where appropriate; and
 - Permittability - Projects that require extensive state and federal permitting were ranked lower.
- Municipalities should consider innovative jurisdictional projects to address the specific needs of their communities.
- Incorporate green infrastructure techniques and nature-based solutions into future project plans.

- Acquire lands through Conservation 20/20 program or other methods to preserve open spaces for improved water management.
- Cooperation between jurisdictions for restoration of historic flow ways.
- Localities are continually making new investments in advanced modeling to increase community resilience. Reviewing and partnering with other municipalities can showcase best practices and guide successful implementation of this Initiative.
- Consider armoring approach abutments to canals and bridges with appropriate materials for each site.

Related Initiatives

- PC-004 Supporting Regional Disaster Debris Management
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- NR-001 Protecting Coastal and Natural Buffers
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- NR-005 Coordinating Regional Land Acquisition and Management
- HG-001 Supporting Regional Housing Coordination
- HG-004 Identifying Buyout Opportunities
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities

Funding Sources

- Federal Emergency Management Agency
- United States Environmental Protection Agency
- United States Department of Transportation
- United States Army Corps of Engineers
- National Oceanic and Atmospheric Administration
- Florida Division of Emergency Management
- Florida Department of Environmental Protection
- Florida Department of Transportation

Resources

- [SOUTHERN LEE COUNTY FLOOD MITIGATION PLAN.pdf \(leegov.com\)](#)

Improving Water Quality Utilizing Green Infrastructure

Improve water quality through a coordinated water quality improvement assessment, policy recommendations, and direct actions that advance source control, nature-based solutions, and green infrastructure.

NR-003

Objective

Invest in regional actions and policies to improve water quality by addressing contamination from Hurricane Ian as well as historical and potential future sources throughout the area. Advancements include but are not limited to leveraging current and planned Lee County areas in need of water quality improvement to identify regional goals, policy recommendations, and projects including nature-based solutions and green infrastructure.

The County's freshwater and estuarine resources are at risk of contamination from pollutants (which include nutrients like nitrogen and phosphorus, as well as bacteria, sediment, and heavy metals and other pollutants) from various sources, including urban stormwater runoff, human wastewater byproducts, and excess fertilizer. The Florida Department of Environmental Protection regulates water quality by setting standards for the maximum amount of pollution, known as Total Maximum Daily Loads (TMDLs), that are present in the environment. "Nutrient loading" - the amount of nutrients in the water - more than the TMDL standards means that a water body is considered impaired. A TMDL is a scientific determination of the maximum amount of a given pollutant that a surface water can absorb and still meet the water quality standards that protect human health and aquatic life. Waterbodies that do not meet water quality standards are identified as "impaired" for the pollutants of concern - nutrients, bacteria, mercury, etc. - and TMDLs must be developed, adopted, and implemented to reduce those pollutants and clean up the waterbody.

Co-Sponsoring Branches:



Stakeholders:

- United States Army Corps of Engineers
- South Florida Water Management District
- Florida Department of Environmental Protection
- County departmental experts on natural resources, parks, and recreation
- Municipal departmental experts on natural resources, parks, and recreation
- University partnerships

The threshold limits on pollutants in surface waters - Florida's surface water quality standards on which TMDLs are based - are set forth primarily in rule 62-302, Florida Administrative Code, and the associated table of water quality criteria. The quality of the groundwater and surface waters has direct implications for public health and quality of life, the environment including wildlife, and the economy of the region.

Communities can implement a wide range of green infrastructure solutions to minimize pollution and nutrient loading for the purpose of improving and protecting water quality including land acquisition, permeable pavements, greenways, wetlands, stormwater parks and more. Green infrastructure incorporates nature-based solutions like soil, ponds, and plants - into human-made environments; this infrastructure helps to retain and treat stormwater through various natural physical, chemical, and biological processes while decreasing runoff and increasing groundwater recharge through percolation into underlying soil. This train of various nature-based processes built as long-term infrastructure overall contributes to reducing pollutant loading to County waterways. However, possible solutions may come with alternate risks; conducting a cost-benefit analysis on proposed projects that address water quality will help identify the most appropriate path forward with the least implications.

Need

Hurricane Ian contributed to existing water quality deterioration and pollution in many of the County's waterways. The storm stirred up already present pollution on land and in waterways, and the storm debris contributed to hazardous conditions that rendered some beaches and waterways unusable for a time. Floodwaters (including from storm surge and stormwater) picked up many materials and substances and then distributed those pollutants throughout the watershed. The excess nutrient pollution from the storm was compounded by pre-existing water quality impairments in the region. Blue-green algae blooms occurred within the Caloosahatchee River and Estuary during the 2023 wet season following Hurricane Ian, although not as widespread and impactful as both blue green algae (Caloosahatchee) and red tide (SWFL Gulf of Mexico) blooms that occurred in 2018 following Hurricane Irma (2017).¹⁷ In July 2018, Governor Rick Scott declared the blue-green algae bloom event that covered several counties including Lee. Later, in August, an additional state of emergency was declared for the red tide event that plagued our region. Water quality became toxic resulting in high levels of dead sea life on shores damaging natural resources and impacting regional economic sectors including fishing, agriculture, and tourism. Compared to Hurricane Irma, Hurricane Ian did not bring as much rainfall and associated runoff throughout Lake Okeechobee and Caloosahatchee River and Estuary drainage basins. As each storm is different in nature, the most recent experience in reduced algae blooms does not indicate a lower threat from future incidents. In addition, regional water management of Lake Okeechobee halted harmful discharges from Lake Okeechobee towards the Caloosahatchee River and Estuary during Hurricane Ian. However, even without harmful discharges from Lake Okeechobee, pollutant runoff within the Caloosahatchee River and Estuary watershed affected water quality between Ian's landfall in 2022 throughout 2023. Even small-scale algae blooms can negatively impact human health, harm wildlife, disrupt tourism, and depress the economy.

¹⁷ Tiffany Rizzo, (September 22, 2023) Blue-green algae concerns in the Franklin Lock portion of the Caloosahatchee River, WINK News. <https://winknews.com/2023/09/22/blue-green-algae-caloosahatchee/>

Regional Approach

Regional stakeholders should share knowledge to efficiently understand water quality risk and implement coordinated solutions that support the long-term health of shared natural water resources. At the one-year anniversary of Hurricane Ian, multiple entities had already completed and/or initiated new research efforts that can contribute to an in-depth understanding of the post-hurricane stormwater and water quality dynamics of the region.¹⁸ In 2017, Lee County recognized the impact of flooding on the region and commissioned the *Southern Lee County Flood Management Plan* (SLCFMP). The SLCFMP identified conceptual projects that allow for water storage, improved flood control, and conveyance that reduces the risk of flooding during storm events. The projects that incorporate green infrastructure also provide secondary benefits that improve water quality by slowing the flow of runoff leading to improved environmental outcomes. Additionally, the County also plans to complete a Comprehensive Vulnerability Assessment, which will provide updated predictive modeling to account for worsening natural hazard risk through the year 2070. The City of Sanibel has also been funded to complete a State-compliant vulnerability assessment.

These analyses provide a solid foundation on which to develop Regional Green Infrastructure Engineering Design Standards for establishing common green infrastructure policies and programs across the region to enhance water quality. Technical experts in planning and green infrastructure who are familiar with local regulations and infrastructure systems could develop regional policy recommendations to provide jurisdictions with a “tool kit” of locally feasible options. While focused on water quality improvements, the design standards could also include strategies that also support the restoration of historic flow ways and contribute to the conservation of open lands critical to groundwater recharge and water resources protection to improve water quality while reducing flood risk. By aligning on feasible projects and creating a similar regulatory framework, jurisdictions would be well positioned to complete green infrastructure water quality improvements at scale.

Impact

Creating and implementing evidence-based green infrastructure policy recommendations could increase the number of green infrastructure projects to safeguard long-term water quality in the region. Improving and protecting water quality across the region can have multiple social, economic, and environmental benefits. The region would also benefit from the advantages of green infrastructure, which can include reduced flood risk, enhanced water supply, and lower development capital costs.¹⁹

Related Initiatives

- PC-004 Supporting Regional Disaster Debris Management
- IF-008 Improving Potable Water Delivery
- IF-010 Building Back More Resilient Working Waterfronts

¹⁸ Elizabeth Biro. (2023, May 3). Researchers finish weeklong study of Post-Ian gulf water quality. <https://winknews.com/2023/03/23/researchers-finish-weeklong-study-of-post-ian-gulf-water-quality/>

¹⁹ U.S. Environmental Protection Agency. (2023, September). Benefits of green infrastructure. <https://www.epa.gov/green-infrastructure/benefits-green-infrastructure>

- NR-001 Protecting Coastal and Natural Buffers
- NR-002 Flood and Stormwater Management
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration
- NR-005 Coordinating Regional Land Acquisition and Management
- HG-004 Identifying Buyout Opportunities

Funding Sources

- Federal Emergency Management Agency
- United States Environmental Protection Agency
- United States Fish and Wildlife Service
- United States Department of Transportation
- United States Army Corps of Engineers
- National Oceanic and Atmospheric Administration
- The Land and Water Conservation Fund Coalition
- Florida Division of Emergency Management
- Florida Department of Environmental Protection
- Florida Department of Transportation

Resources

- Lee County [Our Water Story](#)

Protecting Ecosystems through Regional Wildlife Habitat Restoration

Develop and implement policies to coordinate protecting diverse ecosystems through regional wildlife habitat restoration in the County with special consideration given to wildlife habitats damaged by Hurricane Ian.

NR-004

Objective

Identify and coordinate policies and regulations across jurisdictions to restore and protect the wildlife habitats and ecosystems native to Southwest Florida. Protecting the places where wildlife lives is crucial to healthy water quality and strengthens the landscapes' ability to defend itself against regional vulnerabilities like wildfires, erosion, and inundation. The County's unique and biodiverse habitats host species that are endemic to Southwest Florida, such as the Florida Panther, Florida Black Bear, Gopher Tortoise, West Indian Manatee, and Smalltooth Sawfish. These iconic species are indicators of biodiverse, healthy ecosystems that are often the first line of defense for human health and property during natural extreme events and must be restored and protected for a more resilient community.

Need

Functional ecosystems provide valuable economic, health, and ecological benefits commonly referred to and often quantified as "ecosystem services." A variety of challenges have posed both historical and potential threats to wildlife. Wildlife habitats in the County were impacted directly by Hurricane Ian and indirectly by the remaining storm debris, which continues to impede the recovery of a wide array of species. Hurricane Ian damages compound existing risks such as algae blooms and bacteria, development pressure, and sea level rise. Recent algae blooms have caused significant issues throughout the County with mortality of manatees, fish, and birds. While the environment is resilient to human impacts if properly planned and managed, higher density and intensity developments

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Environmental Protection
- South Florida Water Management District
- County departmental experts on natural resources, parks, and recreation
- Municipal departmental experts on natural resources, parks, and recreation
- University partnerships

can be incompatible with natural areas and lead to degradation. Transition from natural landscape to developed areas increases the impervious areas and reduces the potential for water to percolate through soil for natural filtration and groundwater recharge. Increased runoff can carry additional nutrients to nearby waterbodies and degrade water quality.

Protecting habitats through land management is not enough to fully address the challenges of this region. Estuarine species experience unique risks from climate change including warming temperature and ocean acidification. Temperature differences in ecosystems like Six Mile Cypress and Estero Bay demonstrate the connection of the terrestrial and estuarine ecosystems, but climate impacts are not fully offset by restoration of the watershed. Implementation of this Initiative requires an approach to ecosystem protection and restoration that includes both terrestrial and estuary species to mitigate all threats in a holistic way.

Regional Approach

A regional approach to restoration includes coordination of policies, incentives, and regulations across jurisdictional boundaries to protect the interconnected habitats of the County. Policies can be developed to incentivize maintaining pervious areas and natural areas. Land acquisition through the Conservation 20/20 Program is one method to preserve environmentally sensitive land that contributes to this regional approach. However, the protection of natural resources and regional ecosystems requires additional coordination of restoration efforts. Lee County has examples of incentives to balance density and intensity in areas such as the Density Reduction/Groundwater Resource area for the purposes of water recharge and resources protection. In this area, if certain criteria are met, additional density is provided as an incentive for private developers to improve, preserve, and restore regional surface and groundwater resources and wildlife habitat of state and federally listed species. To protect wetland and upland habitats, there are incentives in the Land Development Code to reduce development within Lee County. Due to the complicated nature of growth management, jurisdictions must work in coordination to protect habitats that cross regional boundaries to protect wildlife and the sustainability of ecosystem services the region depends upon.

Local, native species depend on interconnected ecosystems and know no jurisdictional boundaries. Therefore, regional collaborations and agreements between state, local governments and private landowners must be developed to protect those ecosystems and associated wildlife from impeding threats such as pollution and development.

To bolster the biodiverse ecosystems, which are a significant contributor to the local economy, it is essential to enact policy changes with regional consideration of impacts. For example, regional watersheds such as the Corkscrew Regional Ecosystem Watershed (CREW) span thousands of acres. Some of this land is managed by state partners but has direct effects on the natural resources of Lee County, the Village of Estero, and the City of Bonita Springs. Without conservation efforts, some of these habitats could be lost and the health of the fish and wildlife will be diminished.

Impact

The recovery and resilience of the region depends on the protection and restoration of natural resources to sustain the ecosystem services and benefits for generations to come. Due to Hurricane Ian's negative impacts and damage to the natural habitats, it is vital to restore the environment to protect the native species and strengthen the ecosystems. Post-storm recovery provides the region an opportunity to identify and coordinate policies to protect the natural habitats of the County. Land acquisition, including the existing Conservation 20/20 Program, can further conserve environmentally sensitive lands and in turn protect wildlife habitats. Benefits of cohesive ecosystem of upland, flow ways, wetlands that are located inland include protection against inland flooding. Threatened and endangered species will benefit from coordinated protection and restoration of diverse ecosystems. The region benefits from coordinating and enacting regulations that will protect and restore habitats from degradation.

While healthy habitats are crucial to natural resources, they also make significant contributions to the regional economy from agriculture and fishing to tourism.

Key Considerations

- Consider establishing a regional working group or committee with a specific focus on habitat restoration across jurisdictional boundaries.
- Update existing and develop new wildlife regulations to restore the diverse ecosystems in the County.
- Remove debris from wildlife habitats to promote ecosystem recovery and continue to support productive environments.
- Work with community outreach programs to educate the public on healthy habitats. For example, the City of Fort Myers is planning to initiate an ecosystem class at Riverside to teach kids the importance of water and understand their responsibility to reduce impact.
- Consider the utilization of sand dunes as buffers for restoration across jurisdictions. Sand dunes are considered a low impact nature-based solution. Implementation requires community education as dune restoration needs often lie on private properties.
- Where feasible, create connected habitats for diverse species on varied scales.

Related Initiatives

- PC-004 Supporting Regional Disaster Debris Management
- IF-010 Building Back More Resilient Working Waterfronts
- NR-001 Protecting Coastal and Natural Buffers
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- NR-005 Coordinating Regional Land Acquisition and Management
- NR-006 Reviving Public Recreation
- HG-004 Identifying Buyout Opportunities
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities

Funding Sources

- United States Fish and Wildlife Service
- United States Department of the Interior
- The Land and Water Conservation Fund Coalition
- The Nature Conservancy
- Conservation Nation
- Philanthropic Funding
- Florida's State Wildlife Grants Program
- Florida Fish and Wildlife Conservation Commission

Resources

- [Conservation 20/20](#)
- [The Lee Plan](#)
- City Comprehensive Plans

Coordinating Regional Land Acquisition and Management

Conserve and protect the land of Lee County and municipalities through the acquisition, restoration, and management of natural areas.

NR-005

Objective

Acquire additional lands of regional environmental importance to strategically preserve and restore natural areas, mitigate the negative impact of future storms, and maximize the social and economic benefits of these natural resources. When ecosystems are protected, the natural environment serves as the first line of defense against physical damage from future disasters. In the County, functioning natural ecosystems also provide many societal, recreational, health, and economic benefits. These areas offer benefits in the areas of wildlife habitat, passive public recreation, open space conservation, surface water management, water quality and water recharge and supply, and flood control. In 1996, the Lee County's voters agreed to establish Conservation 20/20, a land acquisition and management program for environmentally sensitive areas. Continuing to support this program as well as other strategies to protect environmentally sensitive lands can mitigate the adverse effects of catastrophic events while augmenting the socioeconomic advantages of managing the land.

Need

Continued proactive identification and acquisition of environmentally sensitive land will ensure an effective and purposeful balance between land conservation and development.

According to Lee County Economic Development, Lee County's population since 2010 has increased 21.5% and will continue to increase, which will create demand for developers to build new housing communities and expand onto undeveloped land. The acquisition of additional conservation lands will be crucial to reduce

Co-Sponsoring Branches:



Stakeholders:

- South Florida Water Management District
- Florida Department of Environmental Protection
- Florida Forest Service
- County departmental experts on natural resources, lands, parks, and recreation
- Municipal departmental experts on natural resources, lands, parks, and recreation
- University partnerships
- Private and nonprofit conservation landowners

flood risk and mitigate the negative impacts of catastrophic events. Acquisition of lands will also assist with surface water management and protect the drinking water supply for Lee County citizens.

Protecting natural and sensitive areas through land acquisition and management can safeguard biodiversity, prevent the spread of disease, support local economic success, ensure food and water security, and build resilience against rising sea levels. Undeveloped wetlands and uplands currently buffer Low to Moderate Income (LMI) housing in many areas throughout the County providing vulnerable communities with numerous ecosystem services from the wetlands including clean water, flood protection, and control of harmful species.

Regional Approach

The acquisition and conservation of lands through the Conservation 20/20 Program and other means should be expanded to obtain additional land in environmentally sensitive areas in the County. One example is Yellow Fever Creek, an LMI housing development. Acquiring lands that are adjacent to Yellow Fever Creek for conservation would prevent the development of additional impervious areas within the flood zone and protect the LMI areas from further flood risk with the added benefit of offering recreation and quality of life improvements to the local areas.

There are also opportunities for private land acquisitions to conserve and protect natural areas throughout the County. These acquisitions may be facilitated by private conservation partners, non-profit partners, or private landowners. Expanding areas managed by these partners that reach across jurisdictional boundaries can help connect greenways and corridors for the benefit of the region.

While effective, land acquisition and management are not the only solutions to protecting land and natural areas. Innovative implementation of this Initiative throughout the region may look different for each community. Alternative measures could include a regional tree planting program providing additional environmental benefits like protecting wildlife habitats, improving water quality, preventing erosion, absorbing carbon dioxide, and producing more oxygen. Additional advantages of this tactic include property value increases, mitigation of extreme heat, the enhanced appeal of neighborhoods, and a bolstered sense of community through social cohesion derived from volunteerism.

Impact

Protecting and conserving environmentally sensitive lands through acquisition balances the impacts of future growth while buffering complex ecosystems from encroachment. Effectively acquiring lands will improve water quality and preserve the local natural habitat from further water quality degradation. Land acquisition through Conservation 20/20 or other partners and tree planting programs would provide the added benefit of forest connectivity, increase the value of property, and promote resilience in the region. Protecting land balances the impacts of future growth while buffering sensitive areas from encroachment. Environmentally sensitive lands perform services for the region such as natural flood control, enhanced water quality, aquifer recharge, better air quality, wildlife habitat protection, and increased recreational spaces. The socioeconomic impact of acquiring land boosts local economies through tourism and jobs, saving money on healthcare, filtering drinking water, and providing natural disaster mitigation.

Key Considerations

- Consider the present and future economic value of ecosystem services and benefits when prioritizing acquisition of environmentally sensitive lands.
- Consider mapping the links between Conservation Lands, Easements, and Recreation (CLEAR) across jurisdictional boundaries in a regional resilience overlay. This assessment should include an economic and cost benefit analysis to highlight the strategic value.
- Identify the land and water resources that provide economic value to the region through ecosystem services and advance protection and activation of these spaces through alignment with funding opportunities.

Related Initiatives

- IF-010 Building Back More Resilient Working Waterfronts
- NR-001 Protecting Coastal and Natural Buffers
- NR-002 Flood and Stormwater Management
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration
- NR-006 Reviving Public Recreation
- HG-004 Identifying Buyout Opportunities
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities

Funding Sources

- Environmental Protection Agency
- United States Fish and Wildlife Service
- National Oceanic and Atmospheric Administration
- United States Forest Service
- United States Department of Transportation
- United States Department of Agriculture
- United States Department of the Interior
- Florida Division of Emergency Management
- Florida Department of Environmental Protection
- Florida Fish and Wildlife Conservation Commission
- Florida Department of Transportation

Resources

- [Conservation 20/20](#)

Reviving Public Recreation

Revive and repair public parks and recreation damaged by Hurricane Ian.

NR-006

Objective

The rebuilding effort gives the County the opportunity to repair, renovate, and modernize park and recreation facilities, making them ADA accessible, energy efficient, and resilient while expanding civic leisure activities that can benefit residents and visitors of all ages. In addition to repairing damaged athletic fields, pools and bandshells, the recovery can also include expanding public access through growing the multi-modality trail network and linear parks in the region. This network of hiking, paddling, and recreational trails connects greenways and blueways acquired through the Conservation 20/20 Program. These greenways and blueways would serve as the “connective tissue” to provide recreational amenities, programs, and services and increase public access to parks, sports complexes, beach accesses, and other sites. Lee County Parks and Recreation considers a greenway as an open space area that functions as a public linear park, is located alongside or within a canal, power liner, railway or roadway easement or right-of-way, and that contains a multiuse path, often having amenities such as shade structures, landscaping, site amenities, and signage. A blueway is defined as a marked paddling trail that is located on a public waterway and used for nonmotorized recreational activities such as kayaking and canoeing.

Parks are one place that democratizes the residents and encourages civic engagement. The domain of parks and recreation is a dynamic one that has direct implications for other sectors of the community.

Need

Hurricane Ian damaged and destroyed many parks as well as the recreational, cultural, and operational amenities within them; this

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Environmental Protection
- County departmental experts on:
 - Parks and recreation
 - Tourism
 - Conservation 20/20
 - Natural resources
 - Transportation
 - Planning
 - Sports development
 - Public safety
- Municipal departmental experts on:
 - Parks and recreation
 - Sports development
 - Natural resources
 - Public works
 - Transportation
- Arts institutions and organizations in Lee County
- University partnerships
- Friends of BERT
- Non-profit organizations that provide essential youth sports and recreational services

level of damage far exceeds the normal budgets required to operate and maintain these spaces, which has resulted in a large rebuilding funding gap. The County is world renowned for its natural resources, beaches, and preserves. These recreational resources contribute to the reputation and economic vitality of the community. Tourists also travel for sporting events like the River Romp Regatta on the Caloosahatchee River or baseball's Roy Hobbs World Series tournaments. Many special cultural events occur in park bandshells and stages throughout the County. Reviving these facilities lessens the negative economic impact of the storm over the long-term. The COVID-19 pandemic increased resident engagement with public parks and trails, reinforcing the health and fitness benefits of being outdoors. The pandemic also amplified support for constructing more active, outdoor recreational and cultural facilities, especially in underserved areas and places where there is high demand.

Federal funding through the FEMA Public Assistance (PA) program, specifically Category G, helps to restore facilities to pre-storm conditions. However, there is an opportunity within FEMA PA to use the funding as a basis for revisioning and expanding public facilities at these locations. This includes opportunities to make them more resilient, as well as more attractive to residents and visitors. While slow to occur, Public Assistance (PA) funding is a vital basis for these repairs.

Regional Approach

Together, the region can strategize for the revitalization of public recreation amenities and coordinate the funding opportunities so that the County remains a desirable destination to live, work, and visit. Building in layers of resiliency can be achieved through creating better quality-of-life with more open space and greenways; encouraging more active lifestyles; distributing and expanding access to parks, recreation, culture, and natural resources to all neighborhoods; diversifying economic drivers; and continued environmental conservation that elevates the importance of wildlife habitats and local ecosystems. There is already a thorough understanding of needed repairs and improvements; the Lee County Parks and Recreation Department and each municipality conducted an inventory assessment and prioritized needed repairs for FEMA reimbursement purposes.

While residents and visitors may be attracted by the beautiful beaches of the County, they also enjoy paddling along the Great Calusa Blueway trail, biking down the John Yarbrough Linear Park, attending concerts at the Riverside Park amphitheater in Bonita Springs, painting at the Cape Coral Art Center, strolling through shady Fort Myers while appreciating the preserved Royal palm trees, or participating in baseball tournaments and spending money at restaurants, retail shops and hotels. For years, the County has been improving its park and recreation facilities. Through the Conservation 20/20 Program, Lee County has acquired more than 31,000 acres of environmentally sensitive lands, allowing the community to participate in and appreciate the natural world in parks and preserves. Because of Hurricane Ian, some repetitive loss areas may be converted to open space to reduce future risk of harm to community members and financial damages. Repetitive loss areas exist across the County and municipal boundaries; a regional perspective on identifying these areas and deciding their optimum use could result in opportunities to provide prominent passive public recreation. The creation of new recreational amenities would provide residents and visitors with additional access to natural areas and contribute to a high quality of life.

Unique opportunities to convert unused rail lines to new trails and pathways are being considered in transportation planning. Lee County Metropolitan Planning Organization is an established regional coordinating body focused on transportation. They have produced a feasibility study on Rails to Trails that supports the expansion of acquiring land for a multimodal network of multi-use paths that could foster active linear parks, contribute to water management, protect native habitats for plants and animals and educate the public about natural resources. Together the region can apply for funding, determine the feasibility of projects, and build community support for reviving public recreation spaces.

Impact

Repairing and updating the existing park and recreation amenities that were damaged by Hurricane Ian is essential for returning the County to pre-storm conditions, and rebuilding provides the region an opportunity to expand natural amenities for the entire community. Augmenting the parks and trails creates resilience in the community in the economic, environmental, and healthcare realms.

Tourism is one of the greatest economic drivers of the region. Tourists and residents rely on sustainable access to the natural resources of Southwest Florida. This drives the economy and creates jobs. Recreational amenities often inspire visitors to return annually, become seasonal residents, and transition to permanent residents. As for the environmental benefits, passive public recreation allows the possibility for public land to also be used for diverse functions like open space conservation and sustaining wildlife habitats as well as infrastructure needs like water management, water quality, and flood control. Healthy biodiverse ecosystems can help mitigate erosion and buffer storm damage. It provides an opportunity for the community to engage with their natural surroundings, create a deeper appreciation of nature and understand the value of ecosystem services, encapsulating the need to promote the protection of natural resources. And finally, reviving public recreation contributes physical and mental health benefits for the residents of the County. Research has shown that being active in nature and socializing outdoors can decrease stress, improve cognition, lessen anxiety, and reduce depression symptoms. It can also improve sleep, boost immune function, increase cardiovascular functioning while reducing obesity, blood pressure, and risk for diabetes and cancer. These factors combined make for a healthier population and put less strain on the healthcare system and reduce costs throughout the County. Developing more paths and trails will also provide more safety for bikers and walkers compared to alternate routes. The benefits of funding and expanding parks and recreation are exponential.

Key Considerations

- Priority should be given to repairing, renovating, and redeveloping facilities damaged by Hurricane Ian.
- As parks and trails are expanded across the County, land management that considers various sectors from natural resources to economic development can contribute to sustainable development.
- While the County and municipalities have begun to identify priority projects and determined funding gaps, consider a cooperative and regional approach to reviving public recreation. Developing networks of recreational activities that cross jurisdictional boundaries can provide social and economic benefits on a wider geographic scale and encourage the population to be more active outdoors as a component of a high quality of life.

- Incorporate arts and culture sector into the design and approach to parks.
- Considering building mountain bike trails.

Related Initiatives

- IF-010 Building Back More Resilient Working Waterfronts
- NR-001 Protecting Coastal and Natural Buffers
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration
- NR-005 Coordinating Regional Land Acquisition and Management
- NR-007 Supporting Natural Resources Community Outreach and Education
- HG-001 Supporting Regional Housing Coordination
- HG-004 Identifying Buyout Opportunities
- HG-005 Supporting Housing Repair- Reconstruction Programs

Funding Sources

- Environmental Protection Agency
- United States Department of Transportation
- United States Department of Energy
- United States Department of Health and Human Services
- United States Department of Agriculture
- United States Department of the Interior
- United States Army Corps of Engineers
- Federal Emergency Management Agency
- National Oceanic and Atmospheric Administration
- The Land and Water Conservation Fund Coalition
- Florida Department of Environmental Protection
- Florida Fish and Wildlife Conservation
- Florida Department of Highway Safety and Motor Vehicles
- Florida Department of Transportation

Resources

- [Lee County Rail-Trail Feasibility Study Briefing Report \(2021\)](#)
- County and municipal comprehensive plans
- Sanibel Shared Use Path Master Plan
- Public Assistance Reports

Supporting Natural Resources Community Outreach and Education

Identify, organize, and expand cross-jurisdictional public education campaigns that raise awareness of environmental challenges in the County and encourage residents, visitors, and businesses to take steps to reduce negative impacts on natural resources.

NR-007

Objective

Encourage County residents to pursue actions that reduce impacts on local natural resources and contribute to healthy ecosystems by leveraging the shared experiences from Hurricane Ian in community outreach and education. By actively engaging with the surrounding communities, building strong relationships, and raising awareness about the significance of local natural resources, the County will be better positioned to effectively address shared challenges and promote long term stewardship of natural resources.

Need

Hurricane Ian caused destruction to many of the region's natural resources; responsible restoration and long-term management of these resources can have important environmental, social, and economic benefits for the Lee County community. While Lee County and local municipalities do have natural resource preservation practices in place, increasing the understanding and implementation of natural resources management is a long-term resilience strategy for the region. A healthy, functioning natural environment typically reduces the risk of damage from future extreme natural events (e.g., natural coastal buffers such as mangrove forests protect against storm surge and sea level rise, natural spaces and water management infrastructure regulate flow and reduce flooding, and trees and other vegetation provide shade and reduce heat impacts to life and property while providing treatment of water and habitats for wildlife). Educating communities and community leaders about the cascading positive benefits of

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Environmental Protection
- South Florida Water Management District
- County departmental experts on natural resources, parks, and recreation
- Municipal departmental experts on natural resources, parks, and recreation
- Community development districts and other special districts providing utility services
- Utility providers
- Municipal departmental experts on natural resources, parks, and recreation
- Nonprofits involved in environmental education
- School Districts

environmental action, especially where that action supports economic goals, is needed to increase adoption of solutions.

Regional Approach

Actions to fulfill this Initiative would include the coordination, design, and implementation of natural resources outreach and education campaigns. Outreach campaigns could include virtual and/or in-person strategies to identify those with an interest in natural resources and connect them with relevant education and services. Environmental education efforts could then focus on expanding the offering of programs that allows individuals to understand and explore environmental issues, engage in problem solving, and take action to improve the environment.²⁰ Outreach and education efforts could also be coordinated with the Lee County School Districts and higher education institutions. The Lee County School District hosts collaborative events that can be expanded to further their reach into the community.

Lee County created “Our Water Story,” an online story map that provides a visual tour of the watershed, discusses local environmental challenges and root causes, and identifies action steps that the County and partner agencies have taken to help improve local water quality. This resource could be updated to include:

- Post-storm issues and natural resource recovery needs;
- References to and/or additional information about other related campaigns (e.g., land, outreach and education);
- A section highlighting related initiatives by municipalities, school districts, universities, nonprofit and faith-based organizations, and other partners;
- An events section for community engagement and action; and
- Natural Resources Outreach and Education Plan.

Impact

Successful fulfillment of this Initiative would include expanded and/or new action-oriented environmental outreach and education campaigns that increase residents’ commitment to sustainable choices. Natural resources exist and function across political boundaries; the County and local jurisdictions already maintain objectives, policies, programs, and plans for managing natural resources. In addition to those resources, collaboration across local agencies and with external partners supports the development of common sets of education goals across resilience and economic benefits of these resources.

Key Considerations

- Develop a Natural Resources Outreach and Education Plan based on an assessment of current natural resources community outreach and education programs, defined objectives, and aligned educational programming needs across the County.

²⁰ United States Environmental Protection Agency. (2023, October), What is environmental education? <https://www.epa.gov/education/what-environmental-education>

- Update Lee County’s Our Water Story to include post-storm details and focus on outreach, education, and community action/engagement.
- Public outreach campaigns should be data driven and should include the economic value of natural resources to educate and inform local leaders, residents, and visitors.
- Consider including educational information about domestic animals and non-native species and their impact on the environment.

Related Initiatives

- NR-006 Reviving Public Recreation
- HG-004 Identifying Buyout Opportunities
- HG-007 Exploring Mixed-Use Development Opportunities
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector
- CR-003 Advancing Public Art While Rebuilding

Funding Sources

- Environmental Protection Agency
- National Oceanic and Atmospheric Administration
- Florida Department of Environmental Protection
- South Florida Water Management District
- National Resources Defense Council

Resources

- Lee Plan ([Lee Plan \(January 2023\)](#))
- City Comprehensive Plans
- Lee County [Our Water Story](#)



HOUSING

Initiatives



Supporting Regional Housing Coordination

Provide accessible care by expanding telehealth, mobile clinic, and other services in areas of need. Leverage existing relationships between jurisdictional housing leaders to develop and execute a regional strategic housing plan aimed at increasing attainable and affordable housing.

HG-001

Objective

This Initiative proposes that the region develop and utilize a housing-focused strategic plan to identify common ground solutions that result in thoughtful development patterns and increased public benefit throughout the County. The housing sector uses critical data (e.g., projected population, transportation route use) and policies (e.g., zoning, codes, allowable land use) to plan for new and re-development.

A strategic housing plan that identifies community-accepted tools to increase attainable and workforce housing would focus efforts across public, private, and nonprofit entities involved in planning and real estate development.

A strategic housing plan could address the following strategies:

- Planning around employment hubs to meets the workforce’s needs for housing, transportation, access to critical services, and demand for amenities;
- Expanding or adding new mixed-use neighborhoods through incentives or zoning changes;
- The use of land trusts (i.e., an organization of joint landowners that take stewardship or partial control over property with the goal of managing long-term costs for tenets);
- Planning housing close to tourist dependent beach communities to meet the needs of the workforce and mitigate traffic congestion;
- Improving and adding transportation modes/routes, in alignment with expected development;

Co-Sponsoring Branches:



Stakeholders:

- County planning and utilities departments
- Municipal planning and utilities departments
- State and local housing coalitions
- Housing authorities
- Construction and real estate associations
- Professional organizations representing the planning development community
- Neighborhood organizations
- Utility providers
- Property developers

- Identifying parking policies that resolve challenges existing pre-disaster and potentially newly arising in the post-disaster environment; and
- Promotion of new stormwater infrastructure protecting new and developing neighborhoods from flood risk.

Need

The lack of attainable housing necessary to support the Lee County area workforce is an underlying resilience challenge that can be exacerbated by major storms and/or other shocks. More than 37,000 households in the County pay more than 50 percent of their household income toward housing expenses; of those, 43.3 percent are households making between 0-30 percent of the Area Median Income (AMI).²¹ The Countywide “maximum affordable home purchase price” was \$145,522, while the 2017 median sales price for a single-family home was \$246,087.²² Affordable housing research in the region has also identified the lack of transportation and housing near employment nodes as a current challenge for households with low incomes.

Throughout the County there are multiple programs to address the existing housing cost burden and provide incentives to homebuyers, such as the Community Development Block Grant (CDBG) Homeownership Assistance Program, HOME Down Payment Assistance Program, and the Neighborhood Stabilization Program (NSP), but there is still a great need for affordable housing.

Lee County and its municipalities also provide an array of incentives that reduce costs for development with the goal of producing more attainable housing, which could ultimately reduce competition and pricing for housing. The continued evaluation and strategic use of incentives could benefit from cross-community coordination and discussion.

Regional Approach

Many of the housing challenges in the Lee County area cross municipal boundaries and involve core community characteristics requiring strategic development to improve and maximize neighborhoods’ potential. The first step is identifying an existing vehicle - or confirming the need for a new one - for a post-Hurricane Ian vision for collaborative housing planning. Jurisdictions can then evaluate existing affordable housing programs and efforts within the County to identify partners and programs, considering any changes that may have resulted from Hurricane Ian and the first year of recovery. Working formally and informally, jurisdictional leaders can implement approaches and coordinate to leverage technical assistance from regional housing experts like the Florida Housing Coalition, which has deep expertise in the use of land trusts and other innovative approaches to attainable housing.

The need for coordination extends further than between local governments and into the private sector, recognizing the number of private sector development stakeholders involved in all types of property

²¹ Lee County. Analysis of impediments to fair housing choice 2019-2023.

<https://www.leegov.com/dhs/Documents/Planning/PY%202019%20AI%20-%20Final%20Draft%20for%20Public%20Comment.pdf>

²² Lee County. Analysis of impediments to fair housing choice 2019-2023.

<https://www.leegov.com/dhs/Documents/Planning/PY%202019%20AI%20-%20Final%20Draft%20for%20Public%20Comment.pdf>

development. Housing leaders can use a joint vision to help communicate with and incentivize the housing sector to determine gaps and the feasibility of proposed actions that align with community needs and demand.

Impact

Effective coordination in land use and housing recovery planning that leverages the knowledge and resources of the government, community-based organizations, the private sector, and the public at large can result in a thriving County. Allowing housing leaders to develop and collaborate on elements of a housing-focused strategic plan would encourage public engagement, jurisdictional coordination, and mediate community differences in the pursuit of common solutions.

By taking a regional approach, the housing sector will benefit from a multi-jurisdictional oversight group, aligning the needs of differing communities under one umbrella to develop a more complete understanding of the community's assets and liabilities as they plan for the future. A regional housing plan could identify areas to develop new housing in alignment with community services, amenities, and critical infrastructure, while acting as a catalyst to build in a collective manner. Identifying regional development gaps and ensuring coordination between partners will increase overall success during project implementation, including by expediting construction and permitting, so that households move into a home on a quicker timeline. Strengthening the relationship between local governments and the private sector could also assist in promoting commercial development like restaurants, entertainment, and/ or retail in conjunction with housing. Developing cohesive regional policies that create a consistent process for new developments across municipalities will be a more conducive environment to attract developers, especially those who focus on affordable and mixed-use housing. If new housing is constructed near employment centers and public transportation hubs, then it can reduce the reliance on transportation and can reduce traffic congestion in high volume areas by providing alternate modes of travel.

Key Considerations

- Repairing, renovating, and redeveloping affordable, attainable, and workforce housing damaged or destroyed by Hurricane Ian is a high priority.
- The region should invest in a post-storm, countywide 'housing gap analysis' to inform planning priorities. Analysts may want to understand the types of housing needed vs what is being built.
- As part of this Initiative, stakeholders can identify and preserve existing incentives or other strategies that contribute to maintaining the existing affordable housing stock.
- Aligning across jurisdictions may present opportunities for joint legislative agendas or the pursuit of additional funding.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- IF-006 Rebuilding Resilient Communications Infrastructure

- IF-007 Augmenting Resilient Energy Infrastructure
- IF-008 Improving Potable Water Delivery
- IF-009 Improving Resilient Wastewater Infrastructure
- NR-002 Flood and Stormwater Management
- NR-006 Reviving Public Recreation
- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach
- HG-003 Expanding Housing Financing and Legal Service Programs
- HG-004 Identifying Buyout Opportunities
- HG-005 Supporting Housing Repair- Reconstruction Programs
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER -001 Affordable and Adequate Insurance

Funding Sources

- United States Department of Housing and Urban Development
- United States Department of Veterans Affairs
- United States Department of Agriculture
- United States Department of Health and Human Services
- United States Small Business Administration
- Florida Housing Finance Corporation
- Florida Department of Commerce

Resources

- Lee County [Analysis of Impediments to Fair Housing](#)

Coordinating Housing Programs and Services and Enhancing Outreach

Provide a streamlined, coordinated entry point to the housing recovery process for disaster impacted households and individuals, as well as those experiencing personal hardship and unexpected crises, through a unified outreach mission.

HG-002

Objective

Provide a centralized process for residents to access information, services, programs, and resource referrals and for organizations to coordinate provision of such services for unmet housing needs following a natural or personal disaster. Developers and landlords should also be included in the system, so their resources and needs are considered. This Initiative champions increasing consistent communication, with consideration to whole community accessibility, to support regional housing resilience and promote purposeful administration of other Initiatives, as well as existing programs and wrap around services within the housing sector.

Using simple, plain language to describe community plans (i.e., plans about land development and housing standards) eases the burden of understanding for readers/listeners from different backgrounds with diverse knowledge bases. Excluding technical terminology and including digestible descriptions and/or visuals improves a common understanding of the community vision. Communications should be accessible to all populations in their native language and remain consistent and timely with coordinated messaging and strategic updates on a given topic to increase community visibility on existing development plans.

Communicating through various media and methods will also increase accessibility to information. Community members have individual preferences about how they receive and provide information (e.g., through printed text, news outlets, social media, websites, word of mouth from a trusted source, and/or in-person engagement events) based on feasibility, accessibility, and personal

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts in housing, planning, and communications.
- Municipal departmental experts in housing, planning, and communications.
- State and local housing coalitions
- Housing authorities
- Nonprofit and faith-based organizations
- Local media outlets
- Neighborhood organizations
- Volunteer organizations active in disasters

choice. Messaging should also include community data, visuals, and interactive tools that enhance specific topic areas by supplementing written text and spoken words. Increasing the methods of information distribution helps to ensure that more individuals will be able to receive the message so overall increases community knowledge and ability to access housing services.

Need

The amount of housing damage, total destruction, and associated costs caused by a disaster like Hurricane Ian can destabilize and traumatize individuals, households, and the community as a whole. The financial challenge of rebuilding or otherwise securing housing post-disaster is typically most extreme for individuals and communities who were struggling financially pre-disaster.²³ Many households experiencing housing insecurity often have a variety of needs; they face the burden of navigating a bureaucracy of housing programs and/or do not know how to navigate the information or resources.

Outreach and communication are needed to build and socialize community support and develop interest in solutions that increase housing availability and attainability, amid the ongoing housing crisis. The County housing sector challenges existed before Hurricane Ian made landfall in Southwest Florida; storm impacts compounded already low housing availability throughout the region prompting the need to explore creative solutions that also increase resilience to hazard events. According to the *Lee County CDBG-DR Action Plan*, over 39,000 households in the County paid more than 50 percent of their household income towards housing before Hurricane Ian, and there is now an extreme deficit in rental properties ultimately contributing to increased competition for the limited resources and regional reduced housing attainability. Additionally, some community members raise objections about perceived negative impacts related to new workforce housing developments. Communication and outreach are needed to promote a shared understanding of community benefits from attainable housing development and reduce opposition that can disrupt progress.

On top of a tight pre-storm housing market, Hurricane Ian caused catastrophic levels of damage to residential property. The *CDBG-DR 2023 Action Plan Unmet Needs Assessment* estimates the unmet housing need to be \$4,598,352,445, including that almost 80 percent of owner-occupied units and about 20 percent of renter-occupied units suffered major-high or severe damage from Ian. The region now faces the prospect of building back what was destroyed and considering how to do so in a way that also addresses the underlying, pre-storm challenges. Many are overwhelmed by the complex process and the variety of options or may be unaware of programs for which they are eligible. Many need assistance to manage this decentralized network, while some do not even know how to begin. This can impose further hardship if there is a language barrier or other vulnerabilities, like access and functional needs. A coordinated housing recovery process with a unified service program would mitigate and simplify some of this complexity.

²³ Caroline Ratcliff, et al.. (2019). Insult to injury – natural disasters and residents’ financial health. The Urban Institute. https://www.urban.org/sites/default/files/publication/100079/insult_to_injury_natural_disasters_1.pdf

Regional Approach

The approach to addressing housing challenges requires coordination among regional stakeholders to develop common language, resources, and building support for housing outreach strategies. A regional housing communications strategy is one tool that would support consistent messaging. Stakeholders should consider providing information in multiple formats that are accessible in terms of literacy, technological capabilities, and access and functional needs to the end user. Encouraging positive language aligned with proposed developments and policies is a key tactic used to transform notions and remove a barrier to building new housing. Engaging community voices should garner enhanced support for solutions that will meaningfully increase housing options throughout the region such as increased density within existing land use development regulations while maintaining neighborhood character, reduction of vehicle use, encouraging walkable neighborhoods and the development of near-by services. While unrealistic to imagine unanimous support for every development proposal, providing accessible information and addressing community concerns through the recovery process can increase acceptance and support timely rebuilding. Working with news outlets and trusted non-profit organizations providing social services within the region to reach historically underserved populations is another tactic for effective regional communication.

Collaboration on a housing delivery model is another critical solution to address the regional challenge that many housing experts do not know all the other programs that exist beyond their own and often struggle to provide comprehensive guidance to individuals seeking assistance. Collaboratory is currently in process of developing an integrated model that organizes a regional communications strategy promoting consistent services, information, outreach, and access, including vulnerable populations, as well as coordination and information sharing between service providers and across facilities for housing. The Hurricane Ian Housing Connection Services Program will enable residents in need to be connected to the right agencies and organizations considering the clients' housing need, location, and financial situation.

Impact

The anticipated outcome of implementing a coordinated housing services and communications program is to grow community support for rebuilding efforts and improve access to information and resources for those seeking housing recovery assistance. Community support for housing development, fostered through effective and accessible communication, leverages feedback and an understanding of project goals to reduce opposition and prioritize projects that are desirable and vital to increasing resilience. Faster and ultimately successful development approval processes reduce risk for the private sector, result in more housing units, and are a critical component of ensuring the County can rebuild in a way that lessens systemic challenges. Ensuring public education and community outreach are accessible to all is a critical step to gaining community support for new residential developments and housing placements for those who need them. Educational efforts such as "Citizen Planning Academies" for interested residents can expand understanding of planning goals and objectives and the land use process.

The goal of an expedited, successful long-term regional housing recovery will be enhanced when those in need can access a simplified, coordinated, entry system for recovery information, services, programs, and

resource referrals. Getting precise, coordinated assistance based on specific household needs will expedite the recovery process, saving individual residents time, money, and mental health. The collaboration between all the housing programs and wrap around services into one system will make the identification of gaps in the network easier for the partners and will also act as a vehicle to promote capabilities and capacities that already exist. Together, regional stakeholders can coordinate funding applications as needed. Through a collaborative effort by government, nonprofit organizations, and the private sector, residents can navigate the housing recovery process in an efficient and effective manner, with professionals and trained volunteers to assist them. Secure, safe, and resilient housing will in turn stabilize and revitalize the local economy.

Key Considerations

- Leverage regional vulnerability and demographic data to inform communication methodologies and approach to increase the accessibility of information to all residents. Identify vulnerable communities within the region that require additional communication outreach.
- Continue to incorporate warnings about contractor fraud and protection strategies into public messaging.
- Develop and integrate positive messaging that emphasizes the opportunities for improved livability, rather than focusing solely on changes to existing communities. Phrases such as “live where you work” promote positive outcomes from housing and reduce pre – existing prejudice about new developments.
- Engage in meaningful conversations with the public to improve overall understanding of community development plans from all parties and increase trust, encouraging resolution.
- Promote stories of community members benefitting from new developments promotes positive public reception and can increase support from residents who were not previously engaged in housing issues. Intentionally selecting and relating stories back to community values can create a common identity amongst incoming and existing residents.
- Take action to resolve legitimate opposition and constructive criticism; implementing residents’ suggestions may not only combat community member hesitation, but also improve livability for residents of new housing developments.
- Include trusted community partners in engagement events and planning discussions as a strategy to connect with and solicit input from the whole community. Local faith-based and non-profit organizations often have large networks and are well regarded; they can help government and the real estate sector understand the community stance on specific projects, facilitate problem-solving, and assist in messaging efforts.
- Develop public-facing outreach tools, including maps and other graphics, to develop a common understanding of redevelopment.
- Provide elected officials with a policy foundation, including identified tools that can be used to improve developments within their jurisdictions, to help officials advocate for a regional housing strategy.
- Coordinate with 211 to provide information about and connect individuals impacted by a disaster to available programs and resources available to assist with immediate relief and recovery through phone service centers.
- Provide education materials about licensed and unlicensed contractor fraud.

- If needed, survey community to best address needs and identify local service providers, which may want to include:
 - Legal services;
 - Construction services;
 - Financial services;
 - Community services;
 - Goods and services;
 - Design services; and
 - Coordination and counseling services.

Related Initiatives

- IF-009 Improving Resilient Wastewater Infrastructure
- NR-007 Supporting Natural Resources Community Outreach and Education
- HG-001 Supporting Regional Housing Coordination
- HG-003 Expanding Housing Financing and Legal Service Programs
- HG-004 Identifying Buyout Opportunities
- HG-005 Supporting Housing Repair- Reconstruction Programs
- HG-006 Promoting Housing Development Programs
- ER -001 Affordable and Adequate Insurance
- EW-004 Increasing Mental Health Provider Capacity

Funding Sources

- United States Department of Housing and Urban Development
- United States Department of Veterans Affairs
- United States Department of Agriculture
- United States Department of Health and Human Services
- United States Small Business Administration
- Florida Housing Finance Corporation
- Florida Department of Commerce

Resources

- [Lee County Final CDBG-DR Action Plan \(leegov.com\)](http://leegov.com)

Expanding Housing Financing and Legal Service Programs

Establish, promote, and sustain housing financing and legal services programs that provide counseling services, and identify multiple funding sources to increase accessibility of affordable housing, especially for Low and Moderate Income areas.

HG-003

Objective

Expand, coordinate, and develop where needed, Countywide programs for housing financing, homeownership, finance counseling and legal services to help households stay in their homes or relocate to more appropriate housing within the region.

Impacts from Hurricane Ian have compounded the existing housing crisis in the County and greater southwest Florida. Educating individuals and households on how to be responsible and self-sufficient tenants and homeowners will bring stability to families and the local economy. Programs that support community members finance the purchase of homes, paired with homeownership counseling programs, will aid residents in navigating the homeownership process for the first time, and overcoming barriers to home retention. Assist homeowners, and tenants who are facing legal obstacles so they are not prevented from receiving assistance and/or beginning rehabilitation or construction or can avoid eviction procedures. Legal services may include:

- Assisting homeowners with resolving title issues and avoiding mortgage foreclosure;
- Helping individuals and businesses navigate and understand bankruptcy; and
- Assisting tenants with evictions, termination of housing subsidies, housing code violations, and illegal rent increases.

Co-Sponsoring Branches:



Stakeholders:

- Department of Housing and Urban Development (HUD)
- County departmental experts in housing, planning, and economic development
- Municipal departmental experts in housing, planning, and economic development
- Lee County Housing Coalition
- Housing authorities
- Local nonprofit and faith-based organizations
- Recovery case managers
- Social workers
- Flood insurance providers

Need

The combined impacts of the COVID-19 pandemic, inflation, and Hurricane Ian have created significant challenges to the affordability of housing in Lee County. A 2018 Lee County Attainable Housing Coalition Report states that the County includes more than 100,000 cost-burdened households spending over 30 percent of income on housing costs, and more than 50,000 severely cost-burdened households spending over 50 percent of income on housing. A 2019 report by Lee County Human and Veteran Services confirms the number of households paying greater than 30 percent of income toward housing costs is estimated to increase.²⁴

County households are in an unattainable rental market. Vulnerable populations should be closely evaluated through efforts to augment housing affordability. For example, elderly citizens disproportionately reside in areas of high risk in the County. In 2017, at least 19,000 single elderly residents had annual incomes below the financial requirements of their mortgage or rent. Another important consideration is homeless populations that may require transitional housing. While the number of community members experiencing homelessness fluctuates, at present, there are 515 households experiencing homelessness that have contacted Lee County's Coordinated Entry Line seeking assistance with housing.²⁵ The Coordinated Entry Line serves as a gateway to housing services for persons who are experiencing homelessness in the County and provides access to street outreach services, emergency shelter, rapid re-housing, and permanent supportive housing.

Renters, owners, and prospective buyers need information regarding their housing options as well as tools such as financial literacy education, homebuyer counseling and credit repair services to assist with making life changing housing/financial decisions after a disaster.

Research by housing organizations shows that pre-purchase counseling and education reduce future delinquency and default rates. Lee County Housing Development provides pre-purchase counseling and home improvement rehabilitation counseling services (the latter supported through the SHIP grant). Lee County Homeless Coalition/Continuum of Care is also supporting the Unmet Needs Long Term Recovery Group for the County.

Developing mechanisms to distribute and sustain homebuying financial assistance funds and guaranteeing HUD approved agencies and private nonprofit and faith-based organizations are appropriately funded will ensure the County and its partners are better equipped and more accessible to community members in need. Furthermore, expanding existing programs to also address recovery needs such as obtaining and maintaining insurance and addressing mitigation strategies and options will increase overall resilience for the residents of the County.

Regional Approach

Much of southwest Florida is experiencing challenges related to housing affordability and a regional approach that leverages local expertise has the potential to stabilize the housing market and give residents the opportunity to continue to make their home in this community. The County's economic recovery goals are

²⁴ Lee County Human and Veteran Services 2019 Needs Assessment. leegov.com

²⁵ Lee County Emergency Management Hazard Identification and Risk Assessment. (2022).

<https://www.leegov.com/publicsafety/Documents/Emergency%20Management/2022%20Hazard%20Identification%20and%20Risk%20Assessment.pdf>

directly connected to housing affordability. Local employers have voiced concerns regarding the lack of affordable housing and the resulting increased burden to recruit and retain employees. Increasing the availability of attainable housing is paramount to augmenting the economic vitality of the region. There already exists a strong network of private nonprofit and faith-based organizations servicing housing assistance needs in the County that also provide services to community members in neighboring counties. For example, The Lee County FirstPlus Program is a continually funded program that provides first-time homebuyers with downpayment and closing cost assistance on a first-come, first-serve basis. Collaboration, coordination, and planning for increasing housing counseling and financing services should include feedback and lessons learned from existing programs and implementation of new recovery-focused programs in the region. Incorporating this regional understanding and approach to expanding and financing programs will increase resilience and may help to identify or expand upon innovative avenues for making affordable housing more fundable.

Impact

Expanding existing housing financial assistance programs and expanding counseling/assistance to community members in areas such as foreclosure prevention, financing, insurance, and home hardening will shorten the recovery time for households and may increase homeownership rates in the County. Providing renters, owners and prospective homebuyers with housing opportunity information, financial literacy education, credit repair assistance and information on how to maintain and sustain permanent housing will contribute to strengthening the community. Providing prospective homebuyers with homeowner counseling that explains the home purchase process, provides guidance on finding and obtaining necessary financing to purchase a home, and the long-term costs will make for more stable homeownership. Knowing more can help households assess housing options based on financial status, provide credit counseling services, mitigate default/foreclosure proceedings, educate prospective homebuyer's advice on construction costs and sustainability issues as well as refer clients to additional resources or programs.

The County offers multiple programs to address housing cost burden and provide incentives to homebuyers, such as the Community Development Block Grant (CDBG) Homeownership Assistance Program, HOME Down Payment Assistance Program, and the Neighborhood Stabilization Program, but there is still a great need for affordable housing and this current slate of programs, combined with the need to rehabilitate and recover damaged affordable housing units could indicate pathways for increased investment.

Success has also been found through programs like Habitat for Humanity of Lee and Hendry Counties' Affordable Homeownership Program and numerous other private nonprofit organizations and faith-based organizations in the area that provide both funding assistance and homeownership counseling services. Expanding funding programs may ensure these entities are better equipped and available to provide counseling services to community members which may help further address historical issues and resilience of residents. Potential expansion mechanisms and programs shall not be limited to homebuyers but shall also be inclusive of financing developers where strategically appropriate, increasing overall accessibility and access to affordable housing.

Key Considerations

- As a component of housing counseling services, provide professional real estate services including referral to qualified real estate agencies.
- Counselors should receive standardized and approved training. Consider utilizing only HUD approved Housing Counseling Agencies.
- Create a proposed timeline for assistance with housing counseling as component so remain on target to provide assistance to purchase home after housing counseling completed.
- As part of program planning, calculate projected number of prospective homebuyer households that are likely to complete program and purchase home.
- When counseling on reconstruction, rehabilitation and construction issues of green building and energy efficiency should be considered in terms of life cycle costs.
- Enlist or create a non-profit organization to administer, oversee, and manage the delivery of legal services.
- Consider finding solutions to temper and register rent increases.
- An analysis of how Hurricane Ian has impacted the local insurance market may inform overall strategy and decision making, including issues of insurability and risk mitigation.
- To address risk assessment and resilience principles as part of housing counseling, tutorials, drop-in opportunities with computer stations, "on-call", on-line or chat options for professional services counseling on a flexible schedule to support working households may be beneficial.

Related Initiatives

- IF-009 Improving Resilient Wastewater Infrastructure
- HG-001 Supporting Regional Housing Coordination
- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach
- HG-005 Supporting Housing Repair- Reconstruction Programs
- HG-006 Promoting Housing Development Programs
- ER -001 Affordable and Adequate Insurance
- EW-004 Increasing Mental Health Provider Capacity

Funding Sources

- Department of Housing and Urban Development Community Development Block Grant (CDBG)
- Department of Housing and Urban Development Community Development Block Grant – Disaster Recovery (CDBG-DR)
- Department of Housing and Urban Development HOME Investment Partnerships Program (HOME)
- Federal Housing Authority Loan Programs Department of Homeland Security/Federal Emergency Management Agency (FEMA)
- United States Department of Agriculture (USDA) Rural Development
- United States Department of Health and Human Services
- United States Department of Treasury

- Florida Association for Community Action
- Florida Housing Finance Corporation
- State Housing Initiatives Program
- Community Land Trusts (CLTs)
- Privately financed home buyer programs
- Federal Housing Administration (FHA) loans
- United States Department of Veterans Affairs (VA) loans

Resources

- [Hurricane Ian CDBG-DR \(leegov.com\)](https://leegov.com/hurricane-ian-cdbg-dr)
- [The Lee Plan \(as amended through January 2023\) \(leegov.com\)](https://leegov.com/the-lee-plan)
- City Comprehensive Plans
- [LTR Housing Plan.pdf \(leegov.com\)](https://leegov.com/ltr-housing-plan.pdf)
- [Housing Resources | Community Resources | Lee Health](#)
- [Lee County FirstPlus Program \(fha.com\)](https://fha.com/lee-county-firstplus-program)

Identifying Buyout Opportunities

Create an elevation and/or buyout program for repetitive loss commercial and residential properties.

HG-004

Objective

The region can increase community resilience by safeguarding lives and reducing the potential financial damage from disaster events while providing additional natural amenity spaces by strategically targeting the buyout of residential and commercial properties that have experienced repetitive loss. Buyout programs often include acquiring, demolishing, and converting the properties into public parks for passive recreation, open space, or flood storage, such as dry or wet detention ponds. Establishing a buyout program would enable loss homeowners to sell their homes at a reasonable price and move to housing in areas with less risk, removing them from vulnerable areas and future impacts. There are multiple elements to consider when implementing a buyout program, so including sectors like Natural Resources, Public Works, Parks and Recreation, Tax, and Finance in addition to Community Development will support a comprehensive and successful long-term outcome. Purposefully developed buyout programs prioritize equitable outcomes for participants and reduce flood risk. For areas where buyout programs may not be suitable, the development of elevation programs is another tool to advance recovery, reduce homeowners' insurance rates and increase long-term economic resilience.

Need

Specific properties in the Lee County region have been impacted by multiple extreme weather incidents, are classified as repetitive loss properties, and were once again severely damaged by Hurricane Ian, setting the community and property owners back economically. Repetitive loss properties lose value over time and are

Co-Sponsoring Branches:



Stakeholders:

- Federal Emergency Management Agency (FEMA)
- County departmental experts for planning, parks, and natural resources
- Municipal departmental experts in planning, parks, and natural resources
- Utility providers
- Housing developers/contractors
- Natural resource partners

unable to be sold privately, requiring intervention for families, individuals, or businesses to relocate out of harm's way and stay locally. Typically, the loss is so severe that repetitive loss properties become uninsurable (either through lack of coverage options or prohibitively high prices) or beyond reasonable cost to perpetually repair. Property owners, especially homeowners, are left more vulnerable to future damage and with fewer financial resources. Other properties may never have been impacted but are located within an identified hazard zone (e.g., 100-year floodplain), are vulnerable to future disasters, and likely to suffer a loss in value because of their risk exposure.

Data provided by Lee County Community Development indicates that in March 2017 there were 579 repetitive loss properties in the County and its political subdivisions. Fort Myers Beach has the greatest share of such properties. The unincorporated portions of Lee County have the next greatest share. Since 2017, the County has experienced Hurricanes Irma and Ian, which have significantly increased the number of repetitive loss properties as well as actual damage for these property owners.

Regional Approach

Buyout programs are practical examples of how Initiatives can support individual property owners and the broader community goals of economic resilience and environmental sustainability. New greenspaces created in repetitive loss areas can improve environmental health, provide recreational opportunities for residents and tourists alike, and contribute significantly to stormwater management. By acting as natural sponges to absorb excess rainwater and by removing obstructions to flow, these greenspaces reduce the risk of flooding in other parts of the region and help conserve wildlife habitats. In addition to the mitigation provided to the region against future flood damages, relocating residents and businesses in repetitive loss areas out of harm's way also critically alleviates health and safety risks for owners and rescuers.

Impact

In addition to safeguarding people and businesses from dangerous situations and repetitive losses, particularly those having suffered repetitive loss, low- and moderate-income, and vulnerable populations from harm's way, buyouts can reduce the burden these properties have on first responders and emergency management during storm events. Census track data provided by Lee County Community Development indicates that high concentrations of vulnerable populations were significantly impacted by flooding, storm surge, and wind damage from Hurricane Ian. Buyouts offer an escape from the cyclic trap of flooding and repairing and rising costs while property value decreases, allowing individuals the opportunity to start anew. This will also reduce repetitive and severe subsidized flood insurance payments and federal disaster assistance. There are many examples of places where a handful of homes have had repeated damage, received federal funding each time and paid for the same house equating to 3 or 4 times the value. The converted properties will contribute to the tourist economy as recreational parks, to mitigation measures such as green space and/or stormwater management in perpetuity.

Key Considerations

- Buyout programs are completely voluntary and should never be presented as mandatory.
- Acquiring properties in a consecutive location is much more desirable than acquiring them in a scattered plot fashion. This is more ideal for maintaining the land and for potential infrastructure projects.
- The most successful buyout programs try to relocate residents within the same taxing jurisdiction, or at the very least, maintain a sense of connection to their neighbors, services, and institutions that play an important part of their life.
- Consider opportunities of other options for buyouts through land trusts and the private sector.
- Review buyout options for storm damaged mobile home parks and other commercial properties.

Related Initiatives

- IF-010 Building Back More Resilient Working Waterfronts
- NR-001 Protecting Coastal and Natural Buffers
- NR-002 Flood and Stormwater Management
- NR-003 Improving Water Quality Utilizing Green Infrastructure
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration
- NR-005 Coordinating Regional Land Acquisition and Management
- NR-006 Reviving Public Recreation
- NR-007 Supporting Natural Resources Community Outreach and Education
- HG-001 Supporting Regional Housing Coordination
- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach

Funding Sources

- United States Department of Housing and Urban Development:
 - Community Development Block Grant for Disaster Recovery (CDBG-DR)
- Federal Emergency Management Agency (FEMA):
 - Hazard Mitigation Grant Program (HMGP)
 - Building Resilient Infrastructure and Communities (BRIC) program
 - Flood Mitigation Assistance (FMA) program
- United States Army Corps of Engineers
- United States Department of Agriculture
- The Land and Water Conservation Fund Coalition

Resources

- [Buyouts Lessons Learned Sidors Gerber Chavez TNC Full Report 2021.pdf \(nature.org\)](#)
- [Strategic Buyout Program Overview \(nc.gov\)](#)
- [Disaster Recovery Buyout Program - HUD Exchange](#)

Supporting Housing Repair-Reconstruction Programs

Develop a comprehensive strategy for supporting housing repair, reconstruction, elevation and hardening programs for primary homes and rental units throughout the County.

HG-005

Objective:

Due to the high volume of damage to an already vulnerable housing stock, the region will need to lean on and bolster already stretched housing programs for the low and moderate income (LMI) populations and create repair and reconstruction programs to meet the needs of single and multi-family homes for those who do not have the financial resources to rebuild. Prior to Hurricane Ian several housing repair and hardening programs sponsored by government and non-for-profit efforts were operable throughout the County, such as Lee County's partnerships with the Lee County Housing Development Corporation and Habitat for Humanity, Cape Coral's Owner-Occupied Repair Assistance Program, and the State's My Safe Florida Home program. But the needs that the community has far out paces the resources currently available and the eligibility parameters often leaves many in the lurch. Building off the Unmet Needs Assessment that is included in the *Action Plan for CDBG-DR*, the region can continue identifying the unmet housing need for repair, reconstruction, elevation, and hardening and help coordinate efficient programming and use of disaster assistance funding from government, private and non-for-profit sources so those who want to stay and rebuild have that opportunity. These programs will lean on best practices towards mitigation and sustainability so households will be prepared for the next event.

For areas where buyout programs may not be suitable, the development of elevation programs is another tool to advance recovery, reduce homeowners' insurance rates and increase long-term economic resilience.

Co-Sponsoring Branches:



Stakeholders:

- County planning department
- Municipal planning departments
- Housing authorities
- Construction and real estate associations
- Nonprofit organizations in the housing or construction sector

Need

The region needs a coordinated effort of housing experts who can analyze the specific needs of property owners who did not receive sufficient funding from other sources to develop repair and reconstruction programs so they can rebuild and remain in their community. Before Hurricane Ian made landfall, the County was already experiencing a limited affordable and workforce housing market due to a plethora of contributing factors and the destruction from the storm only exacerbated the situation. In 2018 when the most recent Consolidated Plan was written, the County was already amid a serious affordable housing crisis. At that time, housing for single people was the greatest need, followed by affordable units for households with more than five members. People with disabilities were in an acute housing crisis and in particular accessible housing for people with ambulatory issues was in a critical state. Besides the need for these units, the cost burden to pay for housing, that a large majority of the County's lower income was shouldering, was immense and unsustainable at that time. Other significant issues that were outlined in the Consolidated Plan included employment issues, transportation difficulties and low-cost childcare.

According to the latest property damage data included in The Lee County Action Plan for Community Development Block Grant - Disaster Recovery Funds "Hurricane Ian destroyed over 9,900 homes in Lee County and at least 13,000 units suffered serious damage. This unprecedented level of damage rendered a substantial number of the County's housing uninhabitable post-storm, with an additional 24,000 units having suffered lesser levels of damage." So now the community has a more serious affordable housing crisis, more economic and tourism industry issues, the cost burden of housing has escalated and expanded, and the mental health toll continues to grow exponentially. The cost to rehabilitate or replace this housing is out of reach for many of these families who are still reeling from COVID and inflation leaving a deep impact on a fragile housing system. Programs centered around repairing and reconstructing existing homes are more cost effective, however, if located in vulnerable areas susceptible to future impacts other options such as elevation programs could be explored. The crux of the problem is that there are not enough resources available for property owners to repair and mitigate. These programs will require a sustainable funding mechanism to maintain viability.

Regional Approach:

Together the region can provide further insight on the gaps within the community, identify needs and coordinate efforts to identify funding to develop the most appropriate housing recovery programs. Throughout the County there are existing nonprofit and municipal reconstruction and repair programs which may only require additional funding to expand certain services to new parts of the region rather than establishing a new entity. Another reason to take a regional approach is that many federal funding awards are more efficiently managed as multi-jurisdictional bodies and their applications have a better chance of being awarded. The work of housing experts needs to be coordinated to expedite delivery of funds. Additionally, the lack of transportation and attainable housing near employment nodes in the County is a current challenge for low-income households and it is contributing to the intense commuting patterns experienced throughout the

region. Local employers report that it is a challenge for them to recruit and retain qualified employees due to housing prices.²⁶

Impact:

The program will address repair, reconstruction, and resilient construction measures to strengthen homes against future disasters enabling residents to return to their communities. Developing programs to meet these objectives will help protect those in the region who are most susceptible to future hazards. It will also expand eligibility to encompass those that are not only LMI but are experiencing housing cost burden. A stable housing situation provides the household with the ability to improve their economic situation, it gives them the security of being part of a community and contributes to the tax base.

Attainable, safe housing is critical to keeping the Lee County region viable for its citizens; giving the community the resources it needs to rebuild is the key to assuring that happens. When layering and combining multiple funding streams, the impact of managing the grant requirements and compliance issues through a unified effort will be more efficient to administer and the property owners will know where to seek reliable information about the available programs. By encouraging revitalization of existing property, the housing recovery process may aid in job creation and increase economic activity.

Key Considerations

- Both the Expanding Homeownership Programs and Enhancing Housing Outreach Initiative should be considered companion initiatives.
- Disasters create particular difficulties for those with functional and access needs. Programs should consider those needs explicitly so elements that meet those needs are included.
- The speed and scale of post-disaster housing repair and reconstruction in the region will need to surge construction labor.
- Identify business opportunities for small contractors.
- Consider opportunities to incentivize disaster resilience construction.
- Whenever possible connect property owners with wrap-around services to provide comprehensive disaster recovery solutions.
- May need a regional hub for consumers to direct to the right place for housing.
- Safe housing may also contribute to the health and wellbeing of its occupants.
- When designing the programs be certain to put controls in place to limit duplication of benefits and fraud.

Related Initiatives

- NR-006 Reviving Public Recreation
- HG-001 Supporting Regional Housing Coordination
- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach

²⁶ FGCU RERI. (2023). First quarter 2023 executive business climate survey. Florida Gulf Coast University. from <https://www.fgcu.edu/cob/reri/files/bcs/lee-bcs2023q1.pdf>

- HG-003 Expanding Housing Financing and Legal Service Programs
- ER -001 Affordable and Adequate Insurance

Funding Sources

- United States Department of Housing and Urban Development
- United States Department of Energy
- United States Department of Veterans Affairs
- United States Department of Agriculture
- United States Department of Health and Human Services
- Federal Emergency Management Agency
- United States Small Business Administration
- Corporation for National and Community Services
- Florida Housing Finance Corporation

Resources

- [Housing Program Preliminary Application \(leegov.com\)](https://leegov.com)
- [Hurricane Ian Housing Resources \(leegov.com\)](https://leegov.com)
- [Hurricane Recovery | Habitat of Lee & Hendry Counties, Inc. \(habitat4humanity.org\)](https://habitat4humanity.org)
- [Cape Coral Housing Development Corporation \(capecoralaffordablehousing.com\)](https://capecoralaffordablehousing.com)
- [Lee County Final CDBG-DR Action Plan \(leegov.com\)](https://leegov.com)

Promoting Housing Development Programs

Support development, occupancy, and maintenance of new affordable rental and attainable owner-occupied housing by creating policies and providing gap financial assistance to either developers or purchasers.

HG-006

Objective

The dearth of affordable housing has been a long-standing critical issue throughout Lee County and the destruction of thousands of units by Hurricane Ian exacerbated the limited supply. Residents with low to moderate incomes who often live in older units not built to more resilient codes and are in hazardous areas are particularly vulnerable and in need of affordable properties for both ownership and rental. The region is also known to have a higher-than-average elderly population and should take into consideration design requirements of aging in place and parameters of living on a fixed income. New developments should incorporate green building principles and resilience mitigation measures. To sustain and grow the economy, the County needs to support the replacement of housing stock lost due to the disaster as well as create new housing stock to meet both post-disaster recovery needs as well as the already existing housing crisis.

Need

Besides the need for housing units for the workforce and vulnerable populations, other factors like financing, project management, land use and natural resources must be addressed as they complicate programmatic solutions. Several local communities have used federal and local funds for maintenance programs designed for low-income homeowners providing loans or grants, for code compliance and repair/replacement of systems (HVAC), roofing, fencing, or other elements. Separate programs for landlords are also common. The typical requirement is a commitment to reside in the home (e.g.,

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts in housing, planning, and economic development
- Municipal departmental experts in housing, planning, and economic development
- Housing authorities
- State and local housing coalitions
- Housing developers

5 years of residents for homeowners or for landlords, maintaining the affordability of units). These efforts could be scaled up to meet the increased need since Hurricane Ian.

Florida recently adopted the “Live Local Act” that provides additional financing for affordable housing as well as policy provisions expediting permitting for affordable housing projects. Units of County and local government are familiar with the combination and sources of funding, and any provision of additional funds is welcome. However, the complexity of structuring the combination of funding remains a challenge. Another option to explore would be a public-private partnership of a revolving loan model, to help cover the funding gap that affordable housing developers have preventing them from completing and closing projects. If new developments are to be located near economic centers, existing land use policy and zoning requirements may need to be evaluated and updated to accommodate housing proximity to jobs. Additionally, natural resources issues such as conservation, environmentally sensitive conservation habitats, and water problems like storm surge and inundation are significant factors to consider. All these elements, along with labor and supply chain shortages, make for a very complex set of issues to consider when promoting housing development programs.

Regional Approach

Coordinating an effective response that empowers local communities to recover from a disaster according to their own plans and principles tends to produce better outcomes. At the local level policy, capital and investments can be combined; revenues can be set aside for financing; land use policies created directing development to appropriately zoned sites; public investment in facilities and amenities can target areas desired for redevelopment; the permitting process streamlined; and political consensus developed to minimize opposition to growth and development. While many municipalities have housing development programs already in operation, some of these efforts may be strengthened by strategizing as a region and potentially consolidating resources and expertise. It is also a great opportunity for incentivizing the local private sector to participate as the lack of single-family home developers in affordable housing was a noted obstacle.

Impact

Encouraging the development and construction of affordable and attainable housing will increase the overall supply of housing, and incorporating higher-strength materials and construction techniques will increase resilience. These two approaches will help by reducing displacement from storm events, and efforts at directing the development of new housing near transit and employment hubs will assist in maintaining existing residents. Designing and developing housing units for the existing community of the County and considering existing demographics, household financial conditions and the service requirements of the vulnerable, as well as the access and functional needs population will go far in preventing displacement of the residents. Providing financial incentives to housing developers or purchasers to encourage them to build or buy in response to community-defined need for mixed income housing in accordance with requirements for sustainability, mitigation, and development goals will have long-term benefits for not only these households but the entire region.

Key Considerations

- Expanding Homeownership Programs, Enhancing Housing Outreach and Exploring Mixed-Use Development Initiative should be considered companion initiatives.
- Linkage fees and impact fees are tools that local governments use to generate revenue for affordable housing development.
- The Live Local Act, which took effect on July 1, 2023, includes amendments to current law that provide incentives to developers constructing affordable and workforce housing.
- Evaluate available land and land use restrictions to ensure that place-based initiatives can be effectively implemented.
- Identify partners, methods, and funding to acquire, and develop affordable housing.
- There is concern in the community about gentrification and displacement of residents.
- Consider transferable, enforceable periods of affordability as conditions in developments supported by public funds which are intended to decrease community housing burden.
- Acknowledgement of affordable housing increased social gains can be off-set and supported through financial and other tactical incentives by local and other coordinating partners.
- Consider increasing the frequency meetings of local Affordable Housing Committees.
- Disasters create particular difficulties for those with functional and access needs. Programs should consider those needs explicitly so elements that meet those needs are included.
- The speed and scale of post-disaster housing repair and reconstruction in the region will need to surge construction labor.
- Identify business opportunities for small contractors.
- Consider opportunities to incentivize disaster resilience construction.
- Whenever possible connect property owners with wrap-around services to provide comprehensive disaster recovery solutions.
- Safe housing may also contribute to the health and wellbeing of its occupants.
- Consider requiring mixed-use development, incorporation of green building and energy efficiency standards, and disaster mitigation requirements.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- IF-007 Augmenting Resilient Energy Infrastructure
- IF-008 Improving Potable Water Delivery
- IF-009 Improving Resilient Wastewater Infrastructure
- IF-010 Building Back More Resilient Working Waterfronts
- NR-001 Protecting Coastal and Natural Buffers
- NR-002 Flood and Stormwater Management
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration

- NR-005 Coordinating Regional Land Acquisition and Management
- HG-001 Supporting Regional Housing Coordination
- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach
- HG-003 Expanding Housing Financing and Legal Service Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER -001 Affordable and Adequate Insurance
- ER-004 Supporting a Diverse and Resilient Economy
- EW-001 Accessing Early Learning
- EW-002 Expanding Out of School Programming

Funding Sources

- United States Department of Housing and Urban Development
- United States Department of Energy
- United States Department of Veterans Affairs
- United States Department of Agriculture
- United States Department of Health and Human Services
- Federal Emergency Management Agency
- United States Small Business Administration
- Corporation for National and Community Services
- Florida Housing Finance Corporation

Resources

- [Hurricane Ian Housing Resources \(leegov.com\)](http://leegov.com)
- [Hurricane Recovery | Habitat of Lee & Hendry Counties, Inc. \(habitat4humanity.org\)](http://habitat4humanity.org)

Exploring Mixed-Use Development Opportunities

Create vibrant, sustainable, and resilient communities by promoting and advancing mixed-use development in desired areas throughout the region.

HG-007

Objective

Strategically allocate recovery efforts and resources to support mixed-use developments that increase attainable housing, support business growth and job creation, and reduce commuter congestion. Mixed-use zoning is characterized by integrating multiple land uses onto a single property lot and/or neighborhood so that residents and visitors can live/stay, shop, and work in one place. Mixed-use developments can take a variety of forms and be categorized as one of three types: vertical mixed-use, horizontal mixed-use, and mixed-use walkable. All these mixed-use types are characterized by the high degree of integration between the physical and functional elements of the infrastructure. Downtowns are examples of larger scale mixed-use concepts, and many suburbs have developed similar mixed-use, town-square concepts; transit-oriented development is another characteristic of many mixed-use spaces. These types of developments also commonly integrate the built environment (i.e., buildings and infrastructure) with natural elements like pollinating gardens or resilient green infrastructure like bioswales.

Advancing mixed-use throughout the region may involve policy action needed to ensure that mixed-use developments are place-appropriate and responsive to post-disaster community needs. Actions may include consolidating development review and permitting processes and creating a forum to collaboratively access technical assistance and local knowledge sharing. Jurisdictions, the development community, and a local employer may be able to pilot a streamlined mechanism that supports a mixed-use workforce housing development aligned with the needs of employees as a productive test case that can be used to troubleshoot problems

Co-Sponsoring Branches:



Stakeholders:

- County planning department
- Municipal planning departments
- State and local housing coalitions
- Housing authorities
- Neighborhood organizations
- Construction and real estate associations
- Professional organizations involved in planning, construction, and development

before wider application. Additionally, there are components of the Senate Bill 102: Live Local Act that may assist in these efforts such as “by-right” expedited development of affordable housing projects in mixed-use zone districts.

Need

The region will need to reduce existing barriers to developing mixed-use spaces and collaborate to fully realize the potential of mixed-use neighborhoods. While there is significant interest across public and private sectors in its potential benefits, housing developers have identified that the current process to develop mixed-use in certain areas of the County can be complex, costly, and overall burdensome. Additionally, developers have identified that financial, labor, and supply chain difficulties for new development are still a factor resultant from the COVID-19 pandemic.

Pre-lan, mixed-use was also not a common existing development type within the County. Technical assistance and/or education about mixed-use may be needed to familiarize local investors, planners, builders, developers, and regulators with the associated processes (existing and potentially updated) and to overcome the challenges associated with this type of land use. Parking and transit challenges are common barriers mixed-use and higher density development consider implementing strategies for compact communities. It may be useful to include an organization like the Florida Housing Coalition that can offer guidance and examples of successful mixed-use developments within the state. In the post-disaster environment, there may be requirements from U. S. Department of Housing and Urban Development, Sally Mae, and/or other funding entities that may influence the new and/or rebuilt developments.

Regional Approach

As part of holistic recovery and rebuilding efforts, regional stakeholders can collaborate to identify areas that have the potential for and would benefit from mixed-use, determine policy changes that are needed to enable development, and share lessons learned. Mixed-use developments are spaces where the goals of multiple recovery Initiatives relating to economic vitality, resident wellbeing, and infrastructure improvements can be realized. Locating these types of projects near transportation hubs, for example, can spread the benefits throughout the County by providing access to and from other destinations while reducing traffic and air pollution. Nationally, development trends suggest zones that allow for commercial property and residential housing in the same space are the most powerful incentive to development.

Particularly relevant to the post disaster environment, mixed-use projects can repurpose existing buildings or infrastructure that sustained damage or whose original function is now obsolete. Revitalization projects can stimulate a neighborhood and create a new destination area for both residents and visitors. By providing these types of vibrant, amenity-rich residential communities, Lee County and its municipalities may be able to maintain and/or create a competitive edge over other surrounding areas that already have mixed-use or have with fewer and/or less desirable housing options.

Recovery planning stakeholders from multiple jurisdictions and sectors also voiced interest in new and rebuilt mixed-use areas attainable for the different populations, including employees in critical but not top paid sectors of the workforce such as teachers, first responders, and municipal employees. Stakeholders identified the need for attainable workforce housing especially near employment centers like the North Fort Myers Downtown Waterfront area and Page Park as well as on the barrier islands, where there are site specific industries like shrimping, agriculture, and hospitality that need their workers to live locally. The Cultural Resource Branch also specifically identified a need to establish or expand live/work artist units throughout the region in places like Matlacha and Fort Myers.

Mixed use developments that incorporate wrap-arounds services (i.e., “supportive housing”) can help alleviate societal challenges that are the focus of other Initiatives. Supportive housing integrated into mixed-use areas with access to daily amenities (e.g., pharmacies, grocery stores) and medical care, for example, can be desirable places to live for residents who want to independently “age in place” or who may be experiencing physical or mental health illnesses.

Mixed-use developments are inherently cross-sector, involving expertise from local planning, transportation, and economic development officials as well as financing and development teams and residents. Input from these stakeholders will be instrumental in identifying existing constraints and time-consuming procedures currently hampering mixed-use development. A diverse stakeholder group, coupled with expert technical assistance, can also support the success of developments by helping to determine appropriate locations and parameters for mixed-use within the region.

Impact

Mixed-use developments are one solution that can help the Lee County region rebuild from Hurricane Ian while advancing multiple recovery goals. Mixed-use areas are typically economically vibrant, well-activated and connected neighborhoods that offer more walkability (resident health benefits, increased foot traffic for businesses) and reduced commuting times, which contributes to sustainability. They can be designed to reflect the local character of the community with distinct place-making characteristics that are attractive to visitors and residents of all ages. Mixed-use developments provide the region with an opportunity to continue to be an attractive, thriving part of Southwest Florida, that retains its workforce and is a magnet for visitors.

Key Considerations

- Existing land use policies and zoning codes may need to be amended to allow for flexibility needed to accommodate and incentivize developments with mixed-uses.
- Mixed-income developments can have multi-faceted benefits such as:
 - Financial feasibility for developers because they can offset lower returns on affordable units with market-rate units;
 - Prevention of displacement;
 - Community revitalization;
 - Economic mobility options for residents; and
 - Better access to schools.

- Mixed-use developments can integrate greenways, recreational parks, and other open spaces to provide desirable amenities and support a flourishing local outdoor environment.
- Consider expanding the opportunities for allowing Accessory Dwelling Units.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- IF-006 Rebuilding Resilient Communications Infrastructure
- IF-008 Improving Potable Water Delivery
- IF-009 Improving Resilient Wastewater Infrastructure
- IF-010 Building Back More Resilient Working Waterfronts
- NR-001 Protecting Coastal and Natural Buffers
- NR-002 Flood and Stormwater Management
- NR-004 Protecting Ecosystems through Regional Wildlife Habitat Restoration
- NR-005 Coordinating Regional Land Acquisition and Management
- NR-007 Supporting Natural Resources Community Outreach and Education
- HG-001 Supporting Regional Housing Coordination
- HG-006 Promoting Housing Development Programs
- ER-001 Affordable and Adequate Insurance
- ER-004 Supporting a Diverse and Resilient Economy
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector

Funding Sources

- United States Department of Housing and Urban Development
- United States Department of Veterans Affairs
- United States Department of Agriculture
- United States Department of Health and Human Services
- United States Small Business Administration
- Florida Housing Finance Corporation
- Florida Department of Commerce



ECONOMIC RECOVERY

Initiatives



Affordable and Adequate Insurance

Create mechanisms to address immediate and long-term insurance needs for the County residents and businesses.

ER-001

Objective

This Initiative proposes that regional stakeholders and local insurance sector experts assess gaps and unmet needs and then identify strategies to improve the availability and affordability of all lines of insurance in Lee County and local municipalities. Property insurance – whether for businesses, homeowners, or renters – is a critical component of housing and commercial space affordability, contributing to the long-term resilience and vitality of the region. As an example, there are approximately 64 businesses in the MLK Corridor located within the City of Fort Myers, but consumer demand is estimated to be for 100 businesses; ensuring that new businesses can secure and maintain space is a critical component of growth. Similarly, the cost of homeowners’ and renters’ insurance is a contributing factor to home affordability. Rising insurance premiums contribute to higher monthly payments and overall decreased purchasing power for families and individuals. Maintaining available insurance coverage with affordable rates is one strategy to help ensure that the County remains a viable place to live for residents with any level of income.

It is also important that residents and businesses be able to maintain adequate, not just affordable, insurance coverage; payouts from insurance policies are a critical source of recovery funding that jumpstart the rebuilding process for many individuals, families, and businesses after a major disaster event. The Lee County region will be overall more resilient to the economic impact of future disasters if insurance carriers continue to provide coverage, and homeowners and businesses have access to the tools they need to make informed insurance purchasing and claim management decisions.

Co-Sponsoring Branches:



Stakeholders:

- Citizens Property Insurance Corporation Office of Consumer Experience
- FEMA Office of Flood Insurance Advocate (NFIP)
- Florida Insurance Consumer Advocate
- Florida Insurance Commissioner
- Lee County Property Appraiser
- Economic Development Office

Need

Insurance protecting homes and commercial facilities, particularly flood and wind coverage, is no longer readily available at an affordable price in the County. Florida is a frontline community for changes in the property insurance market; it is one of several states that has seen insurance rates increase significantly, and many insurers change rates and coverages provided in response to catastrophic damages from natural hazard events like Hurricane Andrew (1992) and Hurricane Ian. The total estimated insured losses from Hurricane Ian are \$19,383,519,287 from 758,644 total claims, as of September 30, 2022 according to the Florida Office of Insurance Regulation’s tracking of catastrophe claims. In approximately one year post Hurricane Ian, home insurance rates rose by an average of 35 percent in Florida – higher than in any other state during that period.

Since 2021, many smaller insurance companies in Florida have gone bankrupt, and several larger national firms have decided not to renew some of their Florida policies. Several Recovery Task Force Branches voiced serious concerns about the potential negative impacts on County residents and businesses due to the decreased availability of insurance coverage and the potential lack of viable, affordable options.

Regional Approach

Affordable and adequate insurance coverage is one of the cornerstones of building resilient communities. The underlying insurance principle of spreading the risk is an integral part of making the County more resilient for the future. Reducing losses from disasters is one solution to the challenge of increased insurance rates and decreased insurance availability. The region can collaborate to educate residents and businesses about mitigation measures they can implement, ensure solutions to mitigate damage are integrated into building codes/standards, and potentially partner with external partners to identify cross-sector and/or policy-level financial solutions all as part of lowering costs.

Regional partners can continue to provide technical assistance that educates all residents and businesses about the importance of and ways to access insurance. Lee County, for example, disseminates information about insurance as part of emergency preparedness campaigns. Entities can also continue to refine technical assistance materials ensuring that they incorporate lessons learned from events like Hurricane Ian and are available to all members of the Lee County community.

To extend the impact of existing programs, one possibility could be to create a Countywide storm recovery program that would help fund repair and safety construction initiatives that educate property insurance customers and facilitate conversations between customers and insurance companies to encourage implementation of more resilient construction methods and products to reduce property insurance rates. The two insurers that remain the most consistently available options for residents are the Citizens Property Insurance Company (intended to serve as the provider of last resort for Floridians) and the National Flood Insurance Program (NFIP). These programs each provide an advocacy office or customer experience office that can provide community education services.

The region can also partner with insurers and federal/state insurance officials to identify and implement other financial solutions to maintain a financially stable insurance market and pricing within the state. Regional

conversations could potentially involve the Florida Insurance Commissioner, relevant state officials, and industry experts to investigate the feasibility of and potentially create an incentive program for insurance companies that uses public/private funds to attract and retain insurers within the Florida market.

Some insurance carriers offer discounts to property owners who implement certain cost-effective mitigation measures. The County could convene a meeting with representatives from Citizens Insurance and the National Flood Insurance Program (NFIP) before construction specs are designed for CDBG-DR housing programs so that insurance providers can specify the elements that they look for in a home to make it as safe, resilient, and affordable for the homeowner.

Community Rating System (CRS), a program that offers discounts on flood insurance premiums to communities that qualify through implementation of flood protection activities, is another solution avenue. The benefit to citizens is lower insurance premiums and more flood-resilient communities. To lower the cost of NFIP policies, unincorporated Lee County participates in the CRS. Because of the points earned in this program, owners of property in unincorporated Lee County may qualify for a 25 percent flood insurance discount. Incorporated areas of Lee County also participate in the CRS, although the value of the discount differs among the communities. The County and participating incorporated areas could investigate actions needed to improve CRS ratings, which could result in increased discounts.

Another concept that the region could consider is creating a local micro-reinsurance program that would be sponsored by a public private partnership. A fund can be created in which homeowners and renters could contribute a small portion of money so that they could get a different insurance rate and if needed, funding would be accessible to help them meet higher deductibles.

There is an opportunity for the region to continue to work with the Florida Legislature to push for meaningful insurance reforms.

Impact

A financially stable insurance market with affordable, adequate options for all Lee County residents would benefit all County residents, business, and the overall regional economy. Increased capacity of property insurers providing coverage would be a key outcome. Success could also be measured via improved levels of customer satisfaction across the insurance claims handling process and demonstrated success in raising the number of appropriately and adequately insured property throughout Lee County.

Key Considerations

Some past or existing programs have proven effective but could achieve more with increased resources, considering:

- The County leveraged a portion of its American Rescue Plan Act (ARPA) allocation to establish a grant program that has provided at least 250 local businesses, many in the Dunbar and Lehigh communities, with funding to assess deficits in their business model including their eligibility for insurance. This program could be expanded for greater impact.

- Nonprofit entities in the region also already provide technical assistance for insurance; two examples include the FGCU’s Small Business Development Center (SBDC) Network, which provides business continuation consulting services, and Goodwill Industries of Southwest Florida, which manages a Business MicroEnterprise Program that provides technical assistance for business planning and financial assistance applications.

Related Initiatives

- HG-001 Supporting Regional Housing Coordination
- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach
- HG-003 Expanding Housing Financing and Legal Service Programs
- HG-005 Supporting Housing Repair- Reconstruction Programs
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-003 Building Continuity of Operations for Regional Businesses

Funding Sources

- Federal Emergency Management Agency
- Economic Development Administration
- Florida Department of Financial Services
- Florida Division of Emergency Management
- Florida Department of Commerce

Resources

- Overview of the [Community Rating System](#)
- Associated Builders and Contractors Workforce Fund

Sourcing Disaster Focused Loans and Grants

Implement a funding mechanism for businesses post-disaster to potentially avert closures and enhance economic stability.

ER-002

Objective

Implementing expedited disaster-focused loans and grants for business operations could help businesses reopen sooner, get community members back to work, and put money back into the local economy to bolster economic recovery following a disaster. A business funding opportunity could support immediate business recovery, allowing for real-time cash-flow through the Lee County region. The Lee County Economic Development Department seeks to establish a Disaster Focused Loan Fund and Grant Program to provide support to the business community following a disaster, allowing businesses to reopen faster, and address that nine out of the ten small businesses close within one year if they do not resume operations within five days post disaster.

Identifying key stakeholders and establishing local partnerships is pivotal to creating a meaningful central resource (e.g., designated point of contact, website) that will make connections for businesses in critical need of funding following a disaster. The following activities could provide a framework to develop a Disaster-Focused Loan Fund and Grant Program:

- Prioritize local partnerships that will play a vital role in implementation efforts and management of disaster-focused loans and grants;
- Identify and prioritize gaps in established federal disaster-focused loan and grant programs;
- Collaborate with private partners, investors, and a local bank or trustee that has knowledge and ability to service a revolving loan fund;

Co-Sponsoring Branches:



Stakeholders:

- United States Economic Development Administration
- United States Small Business Administration
- Florida Department of Commerce
- County government departmental experts on economic development and tourism
- Municipal governments departmental experts on economic development and tourism
- Local Chambers of Commerce
- Local industry associations

- Develop and approve a plan to expediate and execute the funding locally and routinely monitor and track funds to ensure they are being utilized efficiently and aligned with established goals and expectations;
- Create an in-depth auditing process to maintain compliance and develop a long-term plan to address future strategic needs to further bolster economic recovery of the region; and
- Consider the creation of a Revolving Loan Fund for economic opportunities not tied to a disaster (i.e., equipment, working capital, or other needs not disaster focused.) This could include a section designated for use during disasters or for facilities used during disasters.

Sourcing loans and grants should seek to prioritize ways to build a nimble economy open to transferable skillsets and technological advances. These efforts will not only enhance the sourcing of a Disaster-Focused Loan and Grant Program but formalize proper mechanisms for implementation.

Need

While multiple programs existed to assist business owners with reopening and rebuilding throughout Lee County, critical gaps were identified due to the compounding effects experienced by local business sectors following the COVID-19 pandemic and Hurricane Ian.

According to the National Association of Counties, most counties nationwide have incurred unforeseen expenditures due to the pandemic. Exacerbating this impact, following Hurricane Ian, County businesses experienced delayed payouts from the U.S. Small Business Administration (SBA). The process for economic impact loans is often slower than structural damage assistance. In total, businesses in the area received \$17.16 million through SBA Business Physical Disaster Loans and \$13.04 million through SBA Economic Injury Disaster Loans following Hurricane Ian.

The areas in the greater region most impacted by Hurricane Ian include the Cape Coral-Ft. Myers, Punta Gorda, and Naples metropolitan areas. These areas account for more than \$150 billion in annual economic output in the state, nearly 15 percent of the Florida economy.

Tourism is a vital component of the Lee County economy. The County attracts five million visitors and \$3 billion in tourist spending annually, according to the Lee County Visitor and Convention Bureau. Hurricane Ian had a significant adverse impact on the area's tourism industry. Six months after Hurricane Ian's landfall, approximately 67 percent of hotel rooms in the County were vacant. Beaches are a primary tourism draw and many were closed following the storm due to damage and safety constraints, a critical concern for local communities including Sanibel Island, Pine Island, and thirteen other barrier islands.

Prior to Hurricane Ian, 20 percent of Lee County residents worked in the hospitality industry. The loss of employees, many of whom experienced significant damage to their homes, has greatly impacted the area's recovery. A Disaster-Focused Loan Fund and Grant Program with capability to resource the immediate recovery and restoration of businesses could bolster the tourism sector following disaster by augmenting continued employment for community members in the industry.

Following Hurricane Ian, qualified individuals, community groups, and organizations indicated an interest in aiding businesses to rehabilitate properties and maintain operating needs following the disaster; however, a

direct connection between those stakeholders and the business community was not available. A pre-established Disaster-Focused Loan Fund and Grant Program could bridge this divide following future disasters, creating important connection points sooner and preventing business closures. Economic stability remains critical to sustained community resilience following a disaster.

Regional Approach

Regional collaboration expands access to funding sources as well as awards available to support a Disaster-Focus Loan Fund and Grant Program and accounts for diverse facets of the economy, which is a key component of building resiliency. Moreover, regional partnerships increase success for securing competitive grants that may allow for innovative solutions to support business variety and growth. Funding mechanisms exist for different sized businesses. Identifying and prioritizing the needs of different sized businesses promotes countywide economic goals and better matches funding needs to identify gaps in existing support.

Impact

A Disaster-Focused Loan Fund and Grant Program supports quicker business recovery post-disaster. Blending the opportunity of private investors and public sector business funding programs could allow for decreasing the risk of proposition for businesses. Increasing access to funding through a Disaster-Focused Loan Fund and Grant Program promotes economic growth and community resilience throughout Lee County.

Key Considerations

- Develop and implement of Disaster-Focused Loan Fund and Grant Program. Consider creating a program to assist businesses with insurance claims.
- Develop a long-term plan for implementation of Disaster-Focused Loan Fund and Grant Program for future disasters.
- Track the number of businesses assisted through the amount of grants and loans disbursed.
- Develop a mechanism to create a pipeline with projects currently taking place.
- Foster resilience in the tourism industry through finding pockets of entertainment and attraction throughout the community/region and diversify the entertainment and attraction options with the consideration of current and future community interests.

Funding Sources

- United States Small Business Administration
- United States Department of Treasury
- United States Economic Development Administration
- Enterprise Florida Virtual Business Matchmaking Grants
- Florida Department of Commerce Rebuild Florida Business Loan
- Florida Restaurant & Lodging Association

Resources

- Lee County Ian Progress Report: [Ian Progress Report \(leegov.com\)](http://leegov.com)
- Resilient Lee [Supporting Business and Workforce Workshop \(resilientlee.com\)](http://resilientlee.com)

Building Continuity of Operations for Regional Businesses

Continue building relationships with businesses, government, and community-based organizations in the region and support business continuity planning for disaster preparedness and recovery.

ER-003

Objective

As the region focuses on economic recovery, one of the most salient components is resiliency of the private sector. The capability of the private sector to remain operational is critical to maintaining and/or quickly recovering economic activity in the County. The private sector owns/manages critical community lifelines (e.g., local airports, electrical supply, grocery stores, pharmacies) and contributes to the long-term vitality of the community (e.g., arts and culture businesses). The following activities would provide additional resources to bolster continuity of operations planning within the private sector:

- Continuing to provide event-specific recovery guidance;
- Developing an all-hazards preparedness business continuity toolkit and training that could be made available to companies in the region, including small businesses, larger corporations, and remote/virtual workers throughout Lee County;
- Increasing investment in resources to assist County businesses with the following: businesses development including identifying target markets/customers, recovery guidance, identifying financing, analyzing financial statements, creating marketing strategies, and providing input on new product ideas; and
- Continuing to support the work begun by the Lee County Economic Development Office (EDO) and the Horizon Council to establish and maintain a Business Hub. Coordination with Visitor and Convention Bureau to reinforce unified communication. The Hub is a reliable central source of information where businesses can find a common methodology to assess the damage and

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts on economic development, public safety, and tourism
- Municipal government departmental experts on economic development, public safety, and tourism
- Chambers of Commerce
- Local Port Authority
- CareerSource of Southwest Florida
- Horizon Council
- Local educational institutions
- Local business community partners
- Local industry associations
- Local hospitality organizations
- Marketing organizations
- Cultural and arts organizations and institutions in Lee County
- Nonprofit organizations and umbrella groups

economic impacts on the business community following a disaster. It can also become a repository for business disaster planning tools.

All four of lines of effort would enhance Lee County's standing as a competitive, business-friendly region in Southwest Florida.

Need

The Lee County economic landscape dramatically changed with little to no warning in the past few years because of two disasters, COVID-19 and Hurricane Ian; creating more tools for the private sector to prepare for and recover from these types of events will make the County more resilient. While the private sector entities in the County have been flexible and adaptable, the impacts of recent large disasters have been difficult; many businesses have not fully returned to normal operations.

Improving communication strategies for sharing critical information and resources could be an impactful next step. There are many government and local professional organizations creating resiliency programs, providing business coaching, offering mentoring assistance, and helping to identify funding options but if the business community is not aware of or able to access these resources in a timely manner, then it may affect their ability to stay in business.

Sourcing and procuring were issues in the past two disasters; developing an existing inventory purchasing program throughout industries in the County could mitigate this issue. Another identified issue is a need for specific resources geared towards the non-for-profit sector, especially for the arts and culture community. A noted gap from previous incidents includes the lack of capacity and capability to manage post-recovery distribution of philanthropy and not having a centrally organized system to track and manage the influx of requests.

Small businesses face unique challenges and tend to have less access to resources. According to FEMA, about 25 percent of businesses do not reopen after disasters, and small businesses are disproportionately affected and less likely to make a full recovery. Having an emergency disaster plan and a continuity of operations plan in place can reduce that risk and help the business recover faster. There is a need to continue improving disaster preparedness and coordinated recovery efforts. Strengthening the connection between private industry and local Emergency Management will help identify best practices for developing business continuity plans, assist with preparedness training, reduce risk, and help the business recover faster.

Regional Approach

Building relationships within the business community and between other organizations and the appropriate government department will strengthen the region's ability to face pertinent issues and endure future hazards. Hurricane Ian was a major catastrophe that affected the entire region's economic system. Much of private industry operates critical infrastructure, essential businesses, and employs over 150,000 people in the County. All over Lee County, a diverse and hardworking workforce contributes to carrying out essential activities, from Chico's, to the shrimp boats of Fort Myers Beach, from Lee Memorial Health System to the

Alliance for the Arts, and to many home-based businesses. During the recent disasters, businesses and workers were a critical component of restoring normalcy and rebuilding the community.

Expanding and augmenting the efforts that are already underway (such as partnering with other local business resources such as SCORE, Horizon Council, Southwest Florida Enterprise Center, Florida SBDC at Florida Gulf Coast University, SW Florida Impact Partners LLC, local Chambers of Commerce, and Lee Building Industry Association) in support of business resiliency will support the strength of the entire economy of Lee County. The regional approach should also be mindful that many businesses are owned by Spanish and Haitian Creole speaking entrepreneurs. A unified and consolidated approach will prevent a fragmented economic recovery and be the catalyst to building back stronger.

Impact

The determination of best ways to organize and strengthen assets, capacities, and interests will be more effective when the region collectively understands the needs of the whole business community. The creation of the local Business Hub has potential to be the driving force to accomplish many of the stated objectives. It could strengthen communication and information sharing as new resources are created and new needs are identified. The Hub could assist in identifying capital and other funding streams. By working with Lee County Public Safety to develop liaisons with the private sector, the Hub can also assist with integrating the private sector into the Emergency Operations Center.

The private sector can contribute to the resilience of the region by taking the initiative to develop effective internal processes and tools for business continuity to enable them to mitigate potential impacts, recover faster, and allow the businesses to contribute to response and recovery efforts. Critically, private sector entities would also contribute to regional resiliency by minimizing downtime and/or quickly recovering to be able to carry out their routine operation that provide essential activities to the community. Considering the different scales of companies, types of business structures, differing needs of sectors of business, and the variety of languages spoken will all be contributing factors to the success of the tools and programs created. Supporting businesses with emergency planning, continuity, and recovery resources can help the community succeed year-round and thrive in the face of disasters.

Key Considerations

- There are numerous resources available on best practices for business continuity planning. Funding for economic resiliency planning may also be available.
- Creating a liaison with the business community and emergency management is important during blue skies as well as during a disaster.
- Research has shown that creating connections with other businesses and organizations before a disaster strike makes a community more resilient by ensuring that entities know their response plans and capabilities and that they are invested in supporting each other.
- A robust communication network is critical so that information reaches all facets of the community and relevant government entities.

- Marketing to and educating businesses on support programs like the Foreign Trade Zones (FTZ), Opportunity Zone, HUBZone, and the Community Development Financial Institutions Fund (CDFI) may propel more business to seek assistance and explore business opportunities.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network
- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- IF-006 Rebuilding Resilient Communications Infrastructure
- IF-007 Augmenting Resilient Energy Infrastructure
- IF-008 Improving Potable Water Delivery
- IF-009 Improving Resilient Wastewater Infrastructure
- ER -001 Affordable and Adequate Insurance
- ER-004 Supporting a Diverse and Resilient Economy
- EW-003 Expanding Lifelong Learning to Support the Workforce
- HS-001 Expanding Behavioral Healthcare Facilities and Resources
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-003 Creating a Mobile Health Clinic System
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector

Funding Sources

- United States Small Business Administration
- Department of Homeland Security/FEMA
- United States Department of Treasury
- United States Department of Health and Human Services
- Florida Division of Emergency Management
- Florida Department of Commerce

Resources

- Library of Congress Small Business Hub
- FloridaMakes Disaster Impacted & Readiness

Supporting a Diverse and Resilient Economy

Support region-wide economic diversity and resilience by developing sector strategies that support business preparedness planning, improved access to training, increased innovation in hiring and new growth goals.

ER-004

Objective

This Initiative calls for the collaborative development of “sector strategies” – sector-specific, unique actions that will improve the viability of emerging and/or growing industries and support existing businesses in the Lee County area. Developing strategies that attract diverse business sectors (e.g., healthcare, manufacturing, technology, and logistics) to the area and increase business resources to prepare for changes in the dynamic and evolving economy is key to sector growth. As economic demands shift in response to social shocks and stressors, a resilient economy will rely on continuity plans and strategies, diversified skill sets, and accessible information to meet the needs of current economic conditions.

Creating economic sector strategies with benchmarks and targets, focusing on business continuity goals, funding repairs, investing in other sectors, and employee retention promotes a resilient economy by creating job opportunities that align with current economic needs. For example, tourism sector investments in attractions outside of natural resources can increase resilience in times where beaches and waterways are impacted or inaccessible.

One priority for these strategies is increasing the accessibility of information and resources for businesses in key sectors, particularly small businesses. For example, The Visitor and Convention Bureau (VCB) currently works with the Lee County Economic Development Office to perform business outreach and encourage employee retention. New efforts could include partnerships between small businesses and workforce organizations/firms that offer fractional

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Commerce
- National Coalition for Arts Preparedness and Emergency Response
- County departmental experts on economic development and tourism
- Municipal departmental experts on economic development and tourism
- Chambers of Commerce
- CareerSource of Southwest Florida
- Local business incubators and economic development centers
- Major arts institutions in Lee County
- Libraries
- Nonprofit organizations in the education and workforce sectors
- Higher education partners
- Advocacy and professional associations
- Adult education institutions
- Technical colleges

human resource services to support workforce needs. Additionally, more central locations for businesses to find tools that help build continuity and recovery plans or general educational and training resources that promote success in business is a priority. Even as information and resources are centralized, efforts to distribute that information across the community also remain critical. Working with established partners to deploy information strategically (e.g., CareerSource) is important.

Sector strategies can also develop innovative solutions to influence how industries and industry leaders seek to grow. For example, targeting key industries to encourage skills-based hiring is an approach that screens for specific competencies, rather than education, credentials, or experience. Encouraging businesses to take this hiring approach is needed to fill in demand jobs and this problem is growing with on-going and inevitable changes in workforce needs.

Other key strategy elements for exploration include:

- Providing small businesses with access to resources that help develop business continuity and recovery plans for future disasters (e.g., creating a data library with educational resources);
- Shifting traditional hiring practices to encourage skills based credentialing with training opportunities (e.g., reduce requirements for education in new industries that can succeed with on-the-job training);
- Creating access to resources for businesses to promote learning and education in their respective emerging industries inclusive of all language needs (e.g., creating a physical or digital resource hub for workforce members to use in upskilling for new industries); and
- Aligning cross-sector objectives to create opportunities for new businesses to flourish (e.g., map lodging and other hospitality developments near new arts and cultural exhibits to attract tourism).

Need

Recent disasters, including Hurricane Ian, have illustrated the need for a diversified economy in the Lee County region. Damage to natural resources, lodging, and food and beverage businesses and disruptions to travel all led to a downturn in the region's vital tourism industry.

Traditional business practices may not be effective in increasing economic and workforce resilience. Goodwill Industries of Southwest Florida reports that nearly 90 percent of businesses in Southwest Florida are microenterprises. Small businesses face unique challenges and tend to have less access to resources. Investing in specific sectors might also require public-private partnerships in emerging industries such as manufacturing, healthcare, technology, or logistics.

Regional Approach

The Lee County Economic Development Office has worked in collaboration with community partners to offer Workforce Training and Certification programs and a Small Business Technical Assistance Program. Utilizing experiences from this work, EDO can be a primary stakeholder in identifying approaches to sector strategies. Expanding existing platforms to work closely with other stakeholders across the region is a key action in developing these strategies in a collaborative manner.

Current community efforts support elements of this Initiative including the Future Makers Coalition Resilience & Diversification Regional Action Team, which is focused on ensuring that Southwest Florida has a cultivated and robust entrepreneurial ecosystem to support start-ups and small business growth. Expansion could help businesses of all sizes with access to resources, especially businesses with 25 employees or less.

Regionally, public-private partnerships would encourage participants to reinvest in the local economy and could encourage the recruitment of new businesses to the area. Collaboration with the private sector could create an opportunity to further develop economic recovery strategies that leverage existing economic development plans, such as those that have been developed around tourism.

Cross sector partners can map business opportunities within the region to maximize the efficient use of development resources and centralize technical support for owning and operating business focused on resilience and long-term success.

The Regional Economic Research Institute (RERI) at Florida Gulf Coast University (FGCU) can support the identification of sector needs by providing research that pinpoints gaps and challenges amongst community businesses and forecasts economic developments. Career Source and FGCU have also supported micro credentialing programs as business resources with the local Collaboratory organization, empowering a more resilient workforce.

Impact

Creating a diverse economy not only benefits new industries but could also support the existing tourism industry and businesses in the Lee County area. While beaches in the County are plentiful, parking can be restricted in some areas, reducing accessibility. Tourism sector strategies can address this issue with investments in capacity to ease access burdens.

Establishing the needed support for employers to shift hiring to focus on competencies while simultaneously providing educational and training resources to businesses, empowers employers to fill in-demand jobs. Aligning hiring practices with the state of the workforce is important for the region's long-term resiliency.

Ultimately, this Initiative promotes an economy that is durable and able to adapt in the wake of economic shifts and changes.

Key Considerations

- Establishing or designating a formal oversight group can help ensure that businesses and the workforce have access to needed resources and opportunities.
- Pursue an assessment of current gaps in the education to workforce pipeline from the perspective of both employers and education institutions to enhance the hiring process. Ensure the assessment includes at-home workers and remote employers for additional opportunities.
- Develop small business survey communications to better understand sector needs and maintain regular communications with stakeholders. Increase accessibility by accounting for all languages and capabilities to capture needs from the whole community.

- Consider partnering with the Lee County VCB and EDO to align new objectives with existing campaigns. For example, VCB and EDO could market the area to attract new businesses.
- Create an accessible small business portal to centralize educational and training resources in a digital library for employer and workforce access including topics like business continuity, project management, human resources, and credentialing or certification related materials.
- Map existing business support and development assets available to the public. Additionally, market benefits of “upskilling” to the workforce to encourage participation including economic mobility and wraparound services that become available.
- Formally including sectors like arts and culture in long term recovery and strategic planning to account for changing roles in disaster.
- Coordinate with overlap services like daycare, transportation to support workers.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- IF-010 Building Back More Resilient Working Waterfronts
- HG-006 Promoting Housing Development Programs
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-003 Building Continuity of Operations for Regional Businesses
- EW-002 Expanding Out of School Programming
- EW-003 Expanding Lifelong Learning to Support the Workforce
- EW-004 Increasing Mental Health Provider Capacity
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector
- CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector

Funding Sources

- United States Economic Development Administration
- United States Small Business Administration
- United States Department of Education
- Florida Department of Commerce
- Florida Department of Education

EDUCATION & WORKFORCE

Initiatives



Accessing Early Learning

Position early childhood learning programs to better prepare children for schooling and increase accessibility to high quality Pre-K education and student funding vouchers.

EW-001

Objective

This Initiative will improve the overall posture of young children entering the school system and increase their lifelong success in higher education and when joining the workforce. Creating and improving existing early childhood learning programs of high quality accessible to all community members is critical to supporting this objective.

Improving program quality includes assessing and evaluating current program gaps and applying new standards across the region, incentivizing program employees to advance their credentials, and providing resources and materials to families with children at home, and/or those unable to access outside early learning care. Increasing access includes funding the expansion of existing programs, partnering with trusted organizations to create new programs in underserved communities, and developing vouchers for families with financial barriers.

Ensuring early learning programs are high quality requires implementing strategies that attract skilled workers. Programs often find themselves competing with higher paying areas to fill teaching positions. Marketing early learning programs as entry level into K-12 teaching or a steppingstone into higher education is one example of a tactic that can increase candidate pools.

Early learning provides young community members with the building blocks to success in the workforce. Investing time and resources into the success of the sector leads to lifelong benefits for both the current and future states of the workforce.

Co-Sponsoring Branches:



Stakeholders:

- New Horizons of Southwest Florida
- Grace Place of Naples
- School districts
- Charter schools
- Local nonprofit and faith-based organizations
- Early Learning groups and coalitions

Need

Before Hurricane Ian's impacts, the Florida Department of Education reported that more than half of children entering kindergarten were unprepared in 2019, only ranking ahead of four out of the 67 counties in the State of Florida. This affects reading proficiency scores, high school graduation rates, and ultimately workforce development. Many of the skill gaps employers identify as barriers to employment begin developing before kindergarten. Furthermore, our workforce needs quality, reliable early childhood education and daycare to be able to work.

The early childhood education and daycare system has been severely upended by a variety of disruptions including but not limited to the COVID-19 Pandemic, Hurricane Ian, and staff shortages requiring a multi-pronged approach to make this critical component of the talent pipeline resilient. Disruptions continued in 2022 with Hurricane Ian impacts further illustrating the need to increase capacity and resilience in regional early learning systems. The frequency of changes in program availability causes confusion amongst community members generating the need to centralize and market existing quality programs and information. The region requires exploration of strategies to make programs and systems more resistant to changes and resilient enabling quick recovery to full functionality. This need also aligns with a secondary objective – efficiently returning the workforce to their normal operations after experiencing disruptions of all natures.

Regional Approach

This Initiative requires partnership amongst private, public, and non-profit stakeholders to effectively work together and address gaps in services throughout the whole community. Some communities require improvements to existing programs while others may need new investments altogether. The Bonita Springs YMCA is an example of a current program/facility serving community members with early learning needs that could increase capacity with some strategic planning, expanding access to others.

Approaches should employ tactics and strategies throughout the region that incentivize businesses or local non-profits to develop early learning programs within their respective scope through grant funding providing workforce members with additional opportunities to access needed care. This could include a large business applying for funding to provide early learning services to employees with young children or faith-based organizations using grant funding to develop similar services to their constituents or community members. Existing programs in the community, like Partnering for Results through Lee County, have provided funding to support the expansion of services. However, post-disaster funding streams may provide an enhanced opportunity for rapid program growth to help meet the community's needs. This includes specialized federal and state grant opportunities and more traditional programs like the Hazard Mitigation Grant Program and the Community Development Block Grant - Disaster Recovery funding.

Stakeholders have also described communication as a need to message the importance of kindergarten readiness to community members and provide parents and families with information on existing resources throughout the region. This can be accomplished by leveraging trusted community partners who regularly engage with community members.

Impact

The National Institute of Child Health and Early Development reports that supporting early learning leads to high test scores through age 21, better grades in reading and math, increased high school graduation and college entry rates, fewer teen pregnancies, improved mental health, lower risk of heart disease in adulthood and longer lifespans. The positive impacts of this Initiative can go beyond directly improving kindergarten readiness rates and lifelong success in the workforce. Newly constructed or enhanced existing facilities can be designed to support other community needs like emergency or special needs sheltering with hardened infrastructure. Sites can also be designated as Resilience Hubs, distribution centers, or staging areas depending on the needs of an incident increasing overall resilience.

Accessible childcare also generates increased economic and workforce resilience. Increasing community capacities in early learning programs and attainability reduces the burden of parents who rely on services to care for their children while they go to work. Employers can also see higher employee retention rates when needed services are conveniently provided in tandem with workplaces.

Key Considerations

- Market existing programs through new avenues and in a variety of ways to ensure opportunities are communicated to all community members in need of early learning services, especially within vulnerable and underserved communities. Include resources listed on the Lee County Birth to Pre-K website when marketing and messaging existing resources to community members.
- Track the number of new accredited childcare centers, number of VPK children enrolled, number of childcare educators with advanced training, average rate of pay for childcare and early learning staff to help measure Initiative success rates.
- When possible, pair affordable housing with daycare to support early learning educators and public/private partnerships.
- Encourage employer, daycare partnerships when feasible.
- Reference existing efforts of community organizations like New Horizons and the Grace Place of Naples, when developing an implantation strategy to avoid common missteps and leverage all existing resources.
- Develop parent advocacy education programs for parents who are non-English speaking. Programs should include bilingual early learning opportunities for young children.
- Develop early learning program start up guidance for interested stakeholders (e.g., private businesses and non-profit or faith-based organizations). Guidance should include grant funding information and best practices in promoting high quality programs.
- Coordinate plan and implementation develop with the Lee County School District to ensure the technical approach aligns with current needs and promotes overall resilience.
- Identify policy barriers and challenges and develop solutions that can address these barriers through incentives and advocacy. Funding is often needed to support these solutions, highlighting the need to advocate for and educate on community needs.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- HG-006 Promoting Housing Development Programs
- EW-003 Expanding Lifelong Learning to Support the Workforce
- EW-004 Increasing Mental Health Provider Capacity
- HS-003 Creating a Mobile Health Clinic System
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- United States Department of Education
- United States Department of Health and Human Services
- United States Department of Housing and Urban Development
- Florida Department of Education
- Florida Department of Children and Families

Expanding Out of School Programming

Expand coordination of and investment in out of school programming to provide K-12 students meaningful wellbeing, academic advancement, and career development opportunities.

EW-002

Objective

Regional partners can collectively increase investment in out of school programming to provide K-12 students with greater access to programs that help support students' overall personal development as well as academic and career achievements. Out of school programming includes before school, after school, expanded learning, and summer programs. These programs promote positive youth development and offer a safe space where youth can explore their potential. Effective programs provide learning settings that bring a wide range of benefits to youth, families, and communities. Programs can support social, emotional, cognitive, and academic development, reduce risky behaviors, promote physical health, and provide a safe and supportive environment for children and youth. Furthermore, these programs provide safe, productive spaces for youth in the time after school but before working parents and caregivers may be available.

Expanding coordination of and investment into out of school programming could include the following strategies:

- Conduct and share new research to inform approaches for out of school programming;
- Expand existing partnerships with and training for nonprofit organizations that provide coordination and/or additional services at schools for all students, but especially for students who are performing below grade level;
- Identify outreach strategy and services for at-risk, abused, or neglected children;

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts on economic development, education, and recreation
- School districts
- Charter schools
- Library systems
- Lee Health
- Early learning and children's services groups
- Workforce coalitions and task forces
- Arts and cultural organizations
- Nonprofit and faith-based organizations

- Coordinate with partners to identify and determine available funding for programs and invest funding into local children’s programs;
- Increase student access to bilingual (English/Spanish) out of school programming/services; and
- Explore solutions to offer year-round out of school programming, which could include expansion of existing or creation of new summer programs, a pilot for year-round schooling, or other tactics.

Need

The County seeks to provide data-driven out of school programming that helps to meet the unique needs of the County’s diverse K-12 student population as they recover from the experience of Hurricane Ian, focus on academics, and prepare to enter the workforce. Lee County is the eighth largest school district in Florida with more than 101,000 students enrolled in 118 schools, including 32 charter schools. Almost 46,000 students live in homes where English is not the primary language. Lee County Economic Development Office has already identified regional trends in the youth student population and youth workforce, with unique considerations within local neighborhoods; overall, the labor force participation rate in the County is about 53 percent. However, the labor force participation for those aged 25-65 years is 80 percent, indicating that labor force participation is significantly lower for residents younger than 25 years. Lee County School District has identified that of the 2022 graduating class, about 60 percent of graduates planned to attend a two- or four-year degree program, about 11 percent planned on attending a technical college/school, about 6 percent planned to enter the workforce directly, and 3 percent planned to enlist in the armed forces, and the remaining 20 percent was uncertain or was choosing an alternative option. Additional data is needed to explain the reason(s) for the younger population’s relatively low workforce participation so that solutions can be offered, including through out of school programming.

Regional Approach

A regional approach to expanding out of school programming includes strategies that build on existing efforts, engage the whole community, and share resources to support effective program implementation. There is already a significant out of school providers network that offers a diverse range of programming. For example, the FutureMakers Coalition works with partners to support the development of high quality before and after school as well as summer programs in partnership with multiple local nonprofit organizations. The goal is to improve student outcomes as well as support teachers and families at little to no cost to the families. Building upon this and other efforts could include formalizing potential current informal “handshake” initiatives and realizing opportunities to expand cross-sector partnerships by working with the healthcare sector to destigmatize and expand mental and behavioral health services through the education system.

Regional stakeholders can also engage the whole community in supporting students as part of expanding or creating new out of school programs and partnerships. Involving and informing parents in out of school programming is critical; bilingual out of school program staffing and communications will help achieve this goal. Additionally, partners can engage the whole community by creating new or expanding appropriate volunteer opportunities that benefit schools and students. Regional stakeholders should also take into

consideration available programs and outreach efforts for children who are in at-risk, abusive, or neglected homes.

The positive impact of these and/or other aligned strategies can be magnified through effective implementation and pooling of resources. For example, schools may need to establish a liaison position to manage expanded programs and/or volunteers and could explore the possibility of sharing staff resources across schools or jurisdictions. Additionally, regional partners may choose to establish data sharing agreements to collect, disseminate, and act on data to inform approaches for out of school program design and implementation. One outcome of this collaborative approach may be that the most vulnerable students who are at risk of being underserved by education (and other) institutions have access to high-quality out of school programming.

Impact

Implementing this Initiative would result in a healthy, well-educated youth population that was supported through graduation and prepared to enter the workforce. Potential measures of success include increasing the number of students in out of school programming, increasing academic proficiency in key subjects, increasing school attendance, increasing teacher engagement/satisfaction, and decreasing “summer melt”. Overall, all students in the County would have access to out of school programming, in their languages, and experience increased support for college and career readiness.

Key Considerations

- Leverage existing programs by assessing the needs for expansion rather than creating new unfamiliar programs for specific groups of youth.
- Develop public charters to include in existing out of school programs to improve overall outcomes.
- Language accessibility and inclusivity should include American Sign Language.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- HG-006 Promoting Housing Development Programs
- ER-004 Supporting a Diverse and Resilient Economy
- EW-003 Expanding Lifelong Learning to Support the Workforce
- EW-004 Increasing Mental Health Provider Capacity
- HS-003 Creating a Mobile Health Clinic System
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- U.S. Department of Education
- U.S. Department of Agriculture
- Florida Department of Education
- Florida Department of State Division of Library and Information Services

Resources

- Lee County School District [Fast Facts](#)

Expanding Lifelong Learning to Support the Workforce

Promote a flexible and resilient workforce by expanding lifelong learning programs and practices, exposing K-12 students to a broader set of career opportunities, and supporting workers of all ages in meeting the changing needs of the economy.

EW-003

Objective

“Lifelong learning” covers the entire lifecycle of a person, from early socialization and pre-school education through the senior years, focusing on the learning process and the individual needs and skills.

At various times in their lives, residents benefit from the ability to gain or advance a diverse set of skills. This can be critically important after a disaster or community shock causes an industry downturn or when a worker’s life goals shift. Providing opportunities to diversify and upgrade skills will require a collaborative search for resources to expand the focus on skill diversity in the K-12 years and further develop adulthood credentialing and “micro-credentialing” programs – training opportunities that allow jobseekers to gain a limited certification in an area without having to pursue higher education or an expensive degree. These efforts will prepare the workforce to weather changes and keep the region’s economy flexible, adaptable, and resilient while also enabling a quick recovery and restoration of normal operations.

Across the region, stakeholders have already piloted credentialing programs as well as programs that focus on skill diversity throughout the education cycle. Program providers, including local universities and Lee County Schools can work alongside employers and economic development officials across jurisdictions to identify and develop new goals for program expansion and ensure programs are accessible in all needed languages and approaches to support the whole community.

Co-Sponsoring Branches:



Stakeholders:

- Nonprofit organizations in the education and workforce sectors. CareerSource of Southwest Florida
- County departmental experts on economic development
- Municipal departmental experts on economic development
- Nonprofit organizations in the education and workforce sectors
- CareerSource of Southwest Florida
- Chambers of Commerce
- County departmental experts on economic development.
- School Districts School districts
- Municipal departmental experts on economic development.
- Technical colleges
- Career Counselors Career counselors
- Community Outreach

Identified target areas for program expansion include the following:

- Exposing children to career paths early on to prepare for entering the workforce. This includes technical jobs and trades that may not require higher education;
- Aligning technical programs in high school systems with emerging and forecasted industries including but not limited to manufacturing, healthcare, technology, and logistics;
- Investing in micro-credentialing programs (e.g., business continuity, grant research, application development, and management) that upskill and qualify workforce members for in demand jobs in an expedited manner;
- Engaging senior workforce members in new training and educational opportunities; and
- Establishing a clearinghouse to connect employers with employees effectively.

Need

Working residents are the driving force behind economic, social, and cultural vitality in Lee County. The workforce is a catalyst for innovation and productivity, shaping the regions' identity and fostering community growth and diversity.

According to Gartner, Inc., an international company with a large campus in the County, over the next 10 years the roles of middle managers will change, and upskilling and digital dexterity will outweigh tenure and experience. That means employees will have to adapt and gain new skills to remain relevant in the workforce. Also, a large number of the region's workforce members are about to enter retirement, highlighting the need to replace the loss of skills. On the other hand, industries needing skilled workforce members can market opportunities to retired and senior community members that are interested in rejoining the workforce. It is important to ensure training and educational resources are available and accessible to all.

The FutureMakers Coalition, a community organization working to qualify workforce members for in demand jobs, reports that more than 60 percent of jobs in Florida will require education beyond high school by 2025. Postsecondary education is increasingly seen as an important step for obtaining beneficial long-term occupational and economic outcomes. While the region has a participatory workforce, the postsecondary education rates are considered low.

Additionally, local natural disasters ranging from red tides to hurricanes like Ian, have made evident impacts on the workforce and economy in the Lee County Region. Harmful algae blooms had direct repercussions to the fishing and shrimping businesses compelling that workforce to relocate. Recent hurricanes and the COVID-19 pandemic also have depressed the tourism and hospitality industry - the region lost nearly 500 jobs between December 2021 and December 2022. These examples highlight the urgent need to provide tools and resources that bridge the gap between employers and job seekers to increase overall sector resilience.

Regional Approach

Regional efforts addressing lifelong learning challenges should be focused on enhancing existing efforts rather than investing in designing new programs. For example, the FutureMakers Coalition Access & Entry Regional Action Team is focused on getting students into postsecondary through career readiness planning and Free Application for Student Aid (FAFSA) completion. This cross-sector team works to identify and address challenges to postsecondary access and increase postsecondary enrollment in education programs aligned with local economic/workforce development, including enrollment in technical education programs.

Presently, the Economic Development Administration (EDA) has funded Florida Gulf Coast University (FGCU) and FutureMakers \$23 million to expand their micro-credentialing programs. Their funding is based upon the success of the micro-credential programs created at FGCU through Lee County's American Rescue Plan Act support allocation. Replicating or expanding these efforts throughout the region increases reach and contributes to a talented workforce pipeline. Existing programs, like FutureMakers' Navigators, serve as a successful model in assisting community members explore higher education and career advancement opportunities but offer limited support (approximately 1200 people) to the community due to a lack of funding.

A more robust, regional employment clearinghouse could connect employers with the workforce for permanent and temporary work by providing targeted services such as skills training, resume review, and job placement. For example, there are 18,000 workers Countywide between the ages of 16-24 who are neither working nor in school. The need is to identify more opportunity areas such as these, train and educate these workers to address business needs, and connect them with employment positions.

Expanding the existing FutureMakers Coalition efforts to include more industry partners and economic development officials from across the region will enhance goal setting, needs assessment, and resource gathering. Further CareerSource of Southwest Florida receives approximately \$15 million a year to support to provide a wide variety of employment and training services and while it serves a 5-county region most of the money is invested in Lee County. CareerSource is recognized by the state as the economic development leader with experience successfully coordinating and convening businesses and career seekers throughout southwest Florida. Expanding their services (e.g., Workforce Development Board and talent acquisition consortium) could increase regional resilience.

Impact

Workers who can flexibly shift career paths as the economy changes or disaster impacts curtail growth are more resilient to change. Investing in proper training and educational programs can greatly impact the workforce within the region. Not only will it create proficient workers within the different industries, but it will also be an economic return on investment through the retainment of employees. The region's skilled workforce growth is supporting the growth of manufacturers, technology firms, and medical related firms. With proper lifelong educational and educational programs, the economy of the County can further flourish and become a hotspot for manufacturers and workers regardless of industry.

Key Considerations

- Identify funding sources that are sustainable and able to support lifelong learning programs in perpetuity.
- Market micro credentialing programs and benefits to establish a shared understanding of the value of upskilling in both traditional and non-traditional roles and employers.
- Working directly with businesses and organizations like the Horizon Council to allows implementers to gain early insights into the needs and concerns of the business community, which in turns allows partners to advocate and act proactively.
- Facilitate career exposure through college internships to prepare students to enter the workforce and develop connections with existing businesses in the region. Also consider mentorships, apprenticeships, and other online educational programs that can accommodate people’s economic growth while remaining in the workforce. Marketing available jobs within the region will reassure college students in pursuing opportunities in the local economy.
- Ensure all resources and tools are available in various languages and preferred methods (e.g., in-person vs. remote, literature vs. interactive training) to accommodate the whole community.
- Invest in new technical colleges that match the emerging industries in the area by reviewing successful models within the region. This includes offerings in other languages to support all members of the community workforce.
- Invest in and market career opportunities through regional job fairs to better connect employers with qualified workforce members and job searchers with opportunities.
- Expand existing programs like Project SEARCH, a yearlong out of school program that prepares students with intellectual and developmental disabilities to be competitive applicants in the workforce.
- Coordinate with existing databases such as Employ Florida to assist job seekers or students in searching for the right job and help employers who are looking for qualified job candidates.
- Create a model of at-work training where a local employer willingly gives employees time during work hours to learn and grow in skills and knowledge, and thus show others the benefits of such a model.
- Identify ways to encourage workforce participation in degree completion programs by leveraging existing programs.
- Ensure strategies address community differences in access by promoting alternatives like connectivity options and satellite locations.
- Advance existing industries to increase workforce resilience in the wake of community shocks and stressors. This includes identifying a path to funding new jobs when a specific sector is impacted.
- Identify continuous hotspots of unemployment throughout communities to implement targeted strategies that address the need described in this Initiative.
- Create a model of training where special needs individuals could learn, on their level, contribute to society utilizing their particular strengths in the workplace, grow in skills and knowledge, and thus ensure a robust livelihood.
- Consider implementing and monitoring support efforts from AmeriCorps programs like American Climate Corps and YouthBuild to achieve Initiative objectives.

Related Initiatives

- ER-003 Building Continuity of Operations for Regional Businesses
- ER-004 Supporting a Diverse and Resilient Economy
- EW-001 Accessing Early Learning
- EW-002 Expanding Out of School Programming

Funding Sources

- United States Department of Education
- United States Department of Labor
- Florida Department of Education
- CareerSource Florida

Increasing Mental Health Provider Capacity

Increase the number of mental health providers in the region and integrate them in high-need settings, making services available to all residents during blue skies as well as during and after a disaster.

EW-004

Objective

This initiative will activate a region-wide, collaborative effort to increase diversification of and access to mental health providers, including those able to provide frontline screening in schools and other settings of high need. By providing more training, educational opportunities and incentives to career-seekers, the Lee County area can support a “whole family” approach to mental health, which focuses equally and intentionally on services and opportunities for the child and the adults. Additionally, more training of frontline staff to ensure they can connect all residents in need to services can lower barriers to access and help lessen the stigma to seeking mental healthcare.

Need

Mental health in daily life, as well as during and after a disaster event, is a top concern of the County residents; the *Community Health Needs Assessment*, published in 2020 (pre-Ian) by the Florida Department of Health, determined that overall mental health was “Fair/Poor” in Lee County. The *Assessment* identifies diagnosed depression, stress, and a low mental health provider ratio as key considerations. The ratio of mental health providers is well below the rest of Florida and the nation; the Florida Department of Health reported that “in fiscal year 2021-2022 the rate per 100,000 of behavioral and mental health professionals in Lee County was 92.1, compared to Florida at 130.4.” In addition to a concerning lack of baseline mental wellbeing and mental health providers, hurricanes can “lead to mental disorders among previously healthy people and worsen the health of those with preexisting mental illness.”

Co-Sponsoring Branches:



Stakeholders:

- County departmental experts on mental health
- FutureMakers Coalition
- Lee Health
- School districts
- Regional health and wellness groups

The needs of youth present a special challenge to the region. One in six U.S. youth aged 6-17 experience a mental health disorder each year, and half of all mental health conditions begin by age 14. Attention-deficit/hyperactivity disorder (ADHD), behavior problems, anxiety, and depression are the most diagnosed mental disorders in children. Yet, only about half of youth with mental health conditions received any kind of treatment in the past year.

Regional Approach

In the Lee County area, there are organizations already working to increase the mental health workforce; Those efforts could be further supported to support three important actions: workforce and needs assessment, more training opportunities, and securing more resources. The Regional Health and Wellness Coalition is a leading forum for coordination on mental and behavioral health issues. The Coalition could be leveraged to lead a region-wide assessment of mental health services to determine the specific kinds of workers that are most needed, but in the least supply. Importantly, differences in need by jurisdiction might also need to be updated to reflect post-Hurricane Ian needs. An area of need identified by local experts includes the collection of mental health data needs for early and secondary education, inclusive of data that suggests untreated cases.

Area educational institutions, including Florida Gulf Coast University, support “micro-credentialing” – the use of certifications that reflect specific training below what is necessary to obtain a degree, but sufficient for providing needed services in the marketplace. Expanding mental health-focused micro-credentialing programs by educational institutions is a key pathway to increasing the workforce. Some of these opportunities should include working in post-disaster environments.

Impact

Some regions have found incentive programs to be a useful tool in bolstering the mental health workforce. A regional approach to pursuing new resources to support incentives is an important action step. Joint applications to foundations and identified state and federal opportunities is another pathway to funding. Coordinating the search for resources across jurisdictions and inclusive to organizations in both government, private and non-profit sectors can increase the likelihood of success. The development of joint proposals and pathways can also be used to support a legislative agenda that advocates for more funding in this area.

To fully integrate this workforce, Lee County Schools will plan to develop new mental health supports that increase access and reduce barriers.

Key Considerations

- Efforts to expand the workforce must be well-integrated with the needs of Lee County Schools and other educational institutions, and part of a plan that details how access will be provided in schools. An area school, Franklin Park Elementary School, has a pilot program for providing mental health “wrap around services” that could serve as a model.

- The post-disaster environment increases the need for mental health services. The Lee County area should develop and train a workforce that can flex to meet this need in high-risk areas.
- Workforce expansion should be closely aligned with the needs of employers and workforce housing considerations to support sustained employment in the Lee County area.
- First responders and emergency support workers can experience mental health impacts at higher rates than the traditional workforce. Ensure resources are available to response and support staff for pre-, during, and post- storm activities.
- Support mental health/sector partnerships, such as police, EMS, court system, others to leverage resources where needed.
- As capacity increases, the region should evaluate enhancing area navigator programs that connect residents to resources. Care Solace, a mental health care coordination service in Lee County, currently operates a navigator program that connects residents to mental health services that could be augmented as the number of workers increases.

Related Initiatives

- HG-002 Coordinating Housing Programs and Services and Enhancing Outreach
- HG-003 Expanding Housing Financing and Legal Service Programs
- ER-004 Supporting a Diverse and Resilient Economy
- EW-001 Accessing Early Learning
- EW-002 Expanding Out of School Programming
- HS-001 Expanding Behavioral Healthcare Facilities and Resources
- HS-003 Creating a Mobile Health Clinic System

Funding Sources

- United States Department of Housing and Urban Development
- United States Department of Health and Human Services
- United States Department of Education
- United States Department of Veterans Affairs
- Florida Department of Health
- Florida Department of Children and Families
- Florida Department of Education

Resources

- [Community Needs Health Assessment \(2020\)](#), Florida Department of Health

A stethoscope is visible in the upper left corner, partially obscured by a large, semi-transparent hexagonal graphic overlay on the right side of the page. The overlay consists of several overlapping hexagons in shades of blue and grey, some with white outlines. The background is a light, textured surface, possibly a wooden table.

HEALTH & SOCIAL SERVICES



Initiatives

Expanding Behavioral Healthcare Facilities and Resources

Address the mental health needs of the community by expanding behavioral health care facilities and resources for residents, enhancing the continuum of care within Lee County and the municipalities.

HS-001

Objective

This Initiative focuses on improving the quality of life and well-being of the community by expanding access to behavioral health care treatment facilities and resources. Behavioral health refers to the mental health and well-being of individuals. One in five U.S. adults experience mental illness each year,²⁷ and extreme weather events increase mental health problems, including among people with no history of mental illness and those at risk.²⁸ Treatment of mental illnesses and conditions requires access to the appropriate resources and facilities. Access to mental health resources requires a coordinated system of care with a variety of inpatient, outpatient, residential, peer support services, crisis stabilization, recovery treatment facilities and telehealth access to comprehensively address behavioral health care needs.

Need

The County lacks a comprehensive system of care for behavioral health services. A *2020 Community Health Needs Assessment* by the Florida Department of Health identified mental health as the top priority within Lee County and surrounding municipalities; the report recommends facility and service improvements to improve care options for residents. Residents of the County have access to only half of the number of mental health providers including

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Children and Families
- Florida Department of Health
- Central Florida Behavioral Health Network
- Florida Gulf Coast University
- Lee County Department of Health
- Lee County School District
- Lee Health, Salus Care, Centerstone, Florida Behavioral Health, Royal Park Hospital, and other health and mental health providers
- Collaboratory
- United Way of Lee, Hendry, and Glades Counties

²⁷ Substance Abuse and Mental Health Services Administration. (2021). Key substance use and mental health indicators in the United States: Results from the 2020 National Survey on Drug Use and Health (HHS Publication No. PEP21-07-01-003, NSDUH Series H-56). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>

²⁸ Centers for Disease Control and Prevention (CDC). Mental Health and Stress-Related Disorders. June 18, 2020. Retrieved from https://www.cdc.gov/climateandhealth/effects/mental_health_disorders.htm#:~:text=Mental%20illness%20is%20one%20of%20the%20major%20causes,p henomenon%20known%20as%20%E2%80%9Ccommon%20reactions%20to%20abnormal%20events.%E2%80%9D

psychiatrists, psychologists, clinical social workers, counselors, and other mental health providers who specialize in mental health care compared to the national average.

Research from the World Health Organization (WHO) suggests between one-third and a half of those directly exposed to natural disasters will develop mental distress within five years of the disaster, meaning that Hurricane Ian has likely increased the need for mental health services in the County. Without a coordinated system of care that can proactively identify emerging issues and direct patients to appropriate and timely treatment, persons with serious mental illness often end up in crisis. While not a universal outcome of mental health crisis, some patients with mental health illnesses do have increased contact with law enforcement. Law enforcement agencies are on the front lines of addressing mental health crises which adds to the responsibilities of those agencies, contributes to overcrowding of correctional facilities, and can contribute to adverse outcomes for patients who are not immediately connected to medical professionals. SalusCare, Inc. and Park Royal Hospital are the only two providers that can receive patients involuntarily admitted under the Baker Act in Lee County and its municipalities. Even with the Crisis Stabilization Units at SalusCare facilities, there are not enough adult nor pediatric beds to handle the demand of behavioral health services and needs of the County residents.

Included in this Initiative is an effort to address the behavioral health worker shortage by supporting the education and training of a workforce.

Regional Approach

The regional approach to address the mental health needs goes beyond just one single funding source and will require additional bed space, acute care, and residential treatment facilities for those experiencing mental illness or substance use disorder. The *Community Development Block Grant-Disaster Recovery Action Plan* identified the unmet needs of the County post-Hurricane Ian related to mental health resources and proposed significant funding to establish a system of coordinated care. Due to the changing nature and acuity of behavioral health care needs of an individual, coordination of services and providers is necessary. A coordinated system of care could also help break down barriers to care such as lack of transportation, economic barriers such as low incomes or lack of insurance, and mental health stigma so that community members can connect with appropriate resources.

There should be continued coordination with neighboring counties and their healthcare systems as steps are taken to implement this initiative. The Health and Wellness Coalition is currently looking for regional assets in other counties to augment behavioral healthcare.

Impact

The resilience of the community to bounce back from Hurricane Ian and thrive even when faced by future disasters depends on its ability to heal and support those with mental health conditions. The current providers of behavioral health care services in the County are offering substantial and meaningful services to the residents who need treatment. Additional facilities and resources are needed as the region recovers from Hurricane Ian and prepares for future hazards. Non-emergency helpline services such as 211, to connect

individuals with social services, should be established and easily accessible. However, stigma and societal pressures still exist for mental health conditions and add barriers to those who seek treatment. With additional facilities and resources to address mental health concerns, the stigma of seeking treatment can be reduced by normalizing access to mental health care. Breaking down barriers to access and the "right-sized" form of mental healthcare will also be contributing factors in this goal.

Key Considerations

- Align efforts to establish and expand mental health facilities with the Community Development Block Grant-Disaster Recovery funding to establish a continuum of care for behavioral health services.
- Plan for the increase in mental healthcare need in a post-disaster environment.
- Include key stakeholders who currently serve as front-line responders in planning to ensure new resources address needs.
- Develop strategy to support and appropriately compensate the experts already providing these lifesaving services to our Lee County citizens.
- Enhance gray sky mental health resources:
- Contemplate other approaches related to disaster mental health which can increase training and mental health resources to get people training.
- During disasters, mental health services via telehealth are a viable option for addressing immediate needs, so long as internet connectivity is available.

Related Initiatives

- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- IF-007 Augmenting Resilient Energy Infrastructure
- ER-003 Building Continuity of Operations for Regional Businesses
- EW-004 Increasing Mental Health Provider Capacity
- HS-003 Creating a Mobile Health Clinic System

Funding Sources

- United States Department of Health and Human Services
 - Substance Abuse and Mental Health Services Administration (SAMHSA)
- Federal Emergency Management Agency
- United States Department of Housing and Urban Development
 - Community Development Block Grant- Disaster Recovery (CDBG-DR)
- Florida Division of Emergency Management
- Florida Department of Health
- Florida Department of Children and Families

Resources

- [Community Needs Health Assessment \(2020\)](#), Florida Department of Health

Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services

Facilitate and promote resilience upgrades for healthcare buildings and systems across the spectrum of care throughout the region.

HS-002

Objective

Ensuring health infrastructure remains viable during a disaster and in its immediate aftermath is a top priority across all resilience efforts and can prevent cascading effects that consume resources in a disaster and complicate response efforts. While FEMA defines many healthcare facilities as “critical” and thus potentially eligible for post-disaster resources to upgrade and maintain their buildings and systems, many facilities that the healthcare community considers indispensable do not rise to the level of the definition that must be met for FEMA reimbursement or funding. FEMA defines critical infrastructure as “those assets, systems, networks, and functions—physical or virtual—so vital to the United States that their incapacitation or destruction would have a debilitating impact on security, national economic security, public health or safety, or any combination of those matters. Key resources are publicly or privately controlled resources essential to minimal operation of the economy and the government.” Additionally, some but not all these healthcare facilities are required by Florida law to provide Comprehensive Emergency Management Plans (CEMP) and Emergency Power Plans (EPP) to Lee County Public Safety. Understanding that there is a gradient of necessity and available resources, and that terminology differs between different agencies is important as the Lee County region begins to identify and categorize healthcare facilities and systems into tiers; using terms like “critical”, “essential”, and “necessary” in the correct context will minimize confusion and contribute to maximizing funding to mitigate health care facilities against future hazards.

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Health
- County departmental experts on public safety, emergency management, and human and veteran services
- Municipal departmental experts on public safety, emergency management, and human and veteran services
- Health and mental health providers
- Social service providers
- Local healthcare coalitions and associations
- American Red Cross
- Volunteer organizations active in disasters

Need

The healthcare system remained active and viable through the Hurricane and in its aftermath, but the experience of Hurricane Ian suggests improvements are needed to ensure that important facilities within the healthcare system - those defined as critical, essential, and necessary - are resilient in the face of a future event with greater impact. Ian exposed vulnerabilities in the region's health and social services system and damaged several key facilities adding to an infrastructure that had just borne the brunt of the COVID-19 pandemic. About 29.3 percent of the population in Lee County are over 65 years old and rely heavily on a functioning healthcare system.

One of the most important decisions made during an emergency is whether to evacuate or shelter in place; the facility and emergency preparedness needs can be different for each scenario and help define the tiers of healthcare facilities. For the highest tier (i.e., the most important/resilient), the goal should be to mitigate these critical facilities up to a level where they are operating consistently throughout a major disaster or emergency event. Second tier "essential" facilities can be those designated and prepared to provide safe sheltering in place, basic healthcare services, and the necessary facilities to quickly return to full operations in the immediate aftermath. By staying open if not fully operational, these essential facilities mitigate the need to evacuate critical patients to other care centers or increase the utilization of special needs shelters.

Efforts to support residents with access and functional needs as well as families with members with developmental disabilities like Autism should be considered a priority in this planning process.

A few things could happen to make this tiered system feasible, including the following:

- Determine the whole spectrum of the healthcare system, and then categorize those facilities into the three levels (critical, essential, and necessary);
- Develop guidance for mitigation and hardening by level and create an accessible assessment tool that can be used by the facilities to quickly understand how their facilities measure up against the guidance;
- Develop a tool to assist facilities that are not required to submit a CEMP or EPP, in creating their own emergency and continuity of operations plans; and
- Locate funding opportunities appropriate to meet the needs of the different types of facilities and the work that needs to be done.

Regional Approach

The local public health system encompasses a complex series of relationships between many entities that support the health of the residents of Lee County and its municipalities and have been working collaboratively to bolster the community. These include healthcare providers, hospitals, primary care providers, urgent care centers, skilled nursing facilities and assisted living facilities, faith-based organizations, crisis stabilization units and mental health providers, first responders, group homes and supportive housing, dialysis centers and other nonprofit organizations like United Way 211, which is the primary means for individuals to connect to social service agencies through the free 24-hour non-emergency helpline. Providers in the community that support routine services to the disabled, including those with Autism Spectrum

Disorder, often provide stability for families and can provide a sense of normalcy following a disaster. Continuing to support the Southwest Florida Healthcare Coalition in their efforts to coordinate regional efforts to improve preparedness for this sector is significant.

The healthcare sector can also work with Public Safety as they assess response to recent events and prepare for future hazards, specifically when developing the next version of the Local Mitigation Strategy (LMS) and Hazard Identification and Risk Assessment (HIRA). It is important that the regional healthcare community knows what the capacities are, where the vulnerabilities lie, and what hazards they may face. Additionally, knowing what part each of the three tiers plays in keeping the system functioning is important for the public at large.

Impact

The healthcare community in the Lee County region can make great strides in being more resilient by collectively agreeing on a classification system for facilities, identifying resilience/continuity standards for each, creating an assessment toolkit, and identifying funding streams to make the needed upgrades. It may be possible to apply for planning grants to help with this effort, which would especially benefit the non-for-profit organizations and those institutions with fewer resources. Creating a tiered healthcare classification system and corresponding resilience standards will help ensure that the citizens of the County get the healthcare they need, whether it is acute or chronic care, ambulatory, or residential, during blue skies and grey skies. Further, strengthening the relationship between the public safety and healthcare sectors during planning can reduce the need for emergency management resources to focus on relocating and sheltering those with medical conditions or special needs during storm conditions. Improving the resilience level of all facilities, no matter the level of service delivery, will likely benefit routine to essential care for patients and healthcare providers alike and reduce the risk of major service interruptions.

Key Considerations

- Preparedness efforts could encompass other hazardous conditions like cyber security issues or another pandemic.
- Many of the critical care facilities gaps and issues are being addressed through federal programs like HMGP and the facilities at the other end of the spectrum usually have more limited access to or capacity to secure financial resources. They may need more outside support to even apply for and manage grants.
- The range of mitigation needs may include large scale upgrades for reliable systems such as potable water, wastewater, and power supply with the potential of built in redundancies, or relatively minor upgrades such as hurricane shutters or an elevated generator. The location of a facility in proximity to flood zones and the age of a building can also be contributing factors to mitigation efforts that are needed.
- Continuity of Operations Planning (COOP) for facilities near areas that are susceptible to flooding or storm surge may include back up plans to relocate in times of crisis to a partner facility inland. Those relationships and agreements should be established in advance, revised and reviewed frequently, and periodically exercised to ensure functionality.

- Engage the nonprofit sector in resilience measures including future development of the Local Mitigation Strategy and Hazard Identification and Risk Assessment.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- IF-006 Rebuilding Resilient Communications Infrastructure
- IF-007 Augmenting Resilient Energy Infrastructure
- IF-008 Improving Potable Water Delivery
- IF-009 Improving Resilient Wastewater Infrastructure
- ER-003 Building Continuity of Operations for Regional Businesses
- HS-003 Creating a Mobile Health Clinic System
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- United States Department of Health and Human Services
- Federal Emergency Management Agency
- Building Resilient Infrastructure and Communities (BRIC)
- Hazard Mitigation Grant Program (HMGP)
- Federal Transit Administration
- United States Department of Energy
- Florida Division of Emergency Management
- Florida Department of Health

Resources

- SWFL Healthcare Coalition (swflcoalition.org)
- Joint Local Mitigation Strategy (leegov.com)
- 2022 Hazard Identification and Risk Assessment.pdf (leegov.com)
- [FEMA non-federal Continuity Plan template](#)

Creating a Mobile Health Clinic System

Provide accessible care by expanding telehealth, mobile clinic, and other services in areas of need.

HS-003

Objective

Enhance work between Lee County and community stakeholders to expand healthcare services through efforts including but not limited to establishing a fleet of mobile health clinics and developing telehealth services available to residents to increase accessibility.

Mobile health clinics are storm-protected units providing pharmacy, mental health, nursing, and other immediate health-related services critical in post-disaster situations and during non-disaster times. In coordination with Emergency Management, these units could also provide emergency treatment and other needed services in a crisis. Lee Health operated one mobile health unit post Hurricane Ian to serve patients in the Dunbar community. Lee County Public Safety operated a small emergency clinic on Sanibel Island while the Sanibel Causeway was inaccessible, and the Florida Department of Health provided similar services on Fort Myers Beach.

Initiative efforts provide alternative means for accessing healthcare during blue sky days and increase redundancy when existing facilities and providers experience service disruptions. Mobile health units could range in size for specific types of deployment and could include fully contained medical units, trailer units, and small pop-up units. The fleet could include but is not limited to:

- Small pop-up units that can move place to place multiple times per day to get immediate basic medical attention (i.e., tetanus shots, bandages, hydration);
- Fully contained medical units that can move place to place daily;
- Trailer units that are temporarily stationed in highly impacted areas to serve longer term needs; and

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Health
- Florida Division of Emergency Management – Emergency Support Function 8
- Lee County Emergency Medical Services
- Lee County Public Safety – Emergency Management
- Lee County Parks and Recreation
- Municipal Emergency Management
- LeeHealth
- Premier Mobile Health
- United Way
- Fire departments
- Family Health Centers of Southwest Florida
- Millenium Physicians
- Ronald McDonald House
- Regional Health and Wellness Coalition
- SalusCare
- Volunteer organizations active in disasters

- Telehealth capabilities that enable remote support for mental and physical wellbeing to triage patients as a force multiplier. Telehealth capabilities may be stationed at set locations.

Need

Due to the predicted future impact of tropical systems and other hazards on healthcare facility operations, there is a strong need to increase sector resilience, and self-contained, mobile clinics are one viable strategy.

The demand for healthcare services often increases during and after disasters. This happens at times when both infrastructure and healthcare workforce members can be impacted by the same event. Hurricane Ian damaged multiple healthcare facilities leaving community members who relied on their services with limited access to health assessments, mental health care, pharmaceuticals, and other healthcare services. Additionally, surge waters limited accessible modes of transportation, which further compromised residents' ability to access healthcare. Mobile health clinics and telehealth services would likely increase healthcare for homebound populations during blue and grey sky days. Community members would likely be less dependent on restoration of facilities to receive prescriptions or any other medical resources and would also be able to receive care in immediate recovery operations.

Regional Approach

The mobile health clinic network could be a combination of coordinated efforts of existing mobile health clinics and additional mobile health clinics that are managed by local providers. It should also be a system that provides all healthcare plans to participate in the network. During emergencies, mobile health clinics could operate in coordination with Lee County and municipalities, emergency medical services agencies, and other first responders to provide critical healthcare services. During non-disaster times, the mobile health clinics could provide regular services in coordination with social service providers, Resilience Hubs, municipalities, and the County. This could result in strengthening the baseline community health level, therefore increasing the population's capacity to weather daily shocks and stressors while also providing equitable access to care for patients with limited mobility.

Healthcare facilities throughout the County experienced damage and utility disruptions during Hurricane Ian. HealthPark Medical Center and Golisano Children's Hospital of Southwest Florida experienced threats from storm surge and impacts to their fire suppression and potable water infrastructure. Dunbar community members experienced disruptions to healthcare services after Hurricane Ian. While some of the healthcare demand from County residents was able to be met by other institutions within the region, LeeHealth was able to establish a successful mobile clinic in just under three months to support the Dunbar community. Lee County maintains two mobile health clinic units for the Florida Department of Health in Lee County, which were funded using CARES allocations. Similarly, the Ronald McDonald House operates a mobile dental clinic servicing schools and communities in need.

Impact

Mobile health clinics with telehealth capabilities would enhance continuity of services available to residents, increase healthcare sector resilience, and reduce challenges in the event of shocks and stressors. Additionally, vulnerable populations could have increased access to healthcare and may experience reductions in the burden of transportation (e.g., additional stress or spent resources due to not owning a car, living further from work, not having access to transportation network). Predetermined staging areas that align with other recovery support services (e.g., Resilience Hubs, points of distribution for emergency supplies) can be socialized to communities ahead of disasters to increase preparedness and streamline recovery.

Key Considerations

- Consider aligning implementation with FEMA Public Assistance (PA) Category B: Emergency Protective Measures.
- Consider sustainability planning of ownership and operation of system with funding. Grant management may also be a requirement. Determine the responsibility for units and maintaining them for use in action and gray skies.
- Consider a maintenance and storage plan for when the mobile units are not in use. Fire departments and other municipal organizations with space and/or mechanical expertise may be able to support.
- Consider aligning operations with the mobile Ronald McDonald Dental Clinic, serving schools and underserved communities.
- Consider aligning clinic staging areas with Resilience Hubs and points of distribution during response and/or short-term recovery operations to streamline access to resources for community members and maximize the contributions of available resources.
- Gray sky operations are coordinated through the Lee County Emergency Operations Center (EOC) and Emergency Support Function 8 (Health and Medical). Consider designating a mobile health clinic liaison to operate within the EOC during emergency incidents or forming a network of providers to coordinate with government leads during emergency incidents.
- Provider networks should consider entering into agreements to create provider-agnostic care options during disasters, to include staffing arrangements.
- Staffing needs to be included as part of the planning and a consideration for any new sites established after a pilot phase. Necessary qualifications, ability to report to work in a post-disaster environment should be part of preparedness planning for this workforce.
- Commercial pharmacy providers should also be included to allow for prescription refills and replacement supplies through normal supply chains.
- Consider making Electronic Medical Records integrations to improve coordination of patient care year-round.
- Consider a marketing campaign to inform community members of services before disasters occur to prepare patients in case of disruptions to communications.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities
- ER-003 Building Continuity of Operations for Regional Businesses
- EW-001 Accessing Early Learning
- EW-004 Increasing Mental Health Provider Capacity
- HS-001 Expanding Behavioral Healthcare Facilities and Resources
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-004 Establishing a Community Resilience Hubs Network

Funding Sources

- Federal Emergency Management Agency
- United States Department of Health and Human Services
- United States Department of Transportation
- Florida Division of Emergency Management
- Florida Department of Health
- Florida Department of Children and Families
- Florida Department of Transportation

Establishing a Community Resilience Hubs Network

Coordinate a network of community Resilience Hubs – everyday community resource centers that can transition to provide sub-clinical, emergency assistance following a disaster - leveraging existing support centers across the region. As community needs are further understood, the County can explore different solutions, widening the network to potentially include a broader range of community-based sites as Hubs, including health, social service, and/or cultural resource centers.

HS-004

Objective

Coordinate a network of voluntary countywide community resource centers that want to pro-actively plan to be a Resilience Hub if needed in future events. Resilience Hubs are locations that provide supplies and/or social services that residents need every day, and these spaces can transition in a disaster to provide critical information, emergency support, and health sustaining supplies to the surrounding communities. Hubs can function as an additional location within the “Points of Distribution” or “POD” system wherein emergency management agencies establish centralized locations where following a disaster or emergency, the public picks up life sustaining commodities such as shelf-stable food, bottled water, ice, and tarps. Hubs can function as spaces to house and provide services as well as host peer support via community gatherings and engagement that sustain a sense of community strength amid disruption.

This Initiative proposes establishing Resilience Hubs across the Lee County area that would provide sub-clinical emergency assistance and become a part of the Public Safety response and recovery continuum of service.

Some key design requirements for Resilience Hub spaces include, but are not limited to, the following:

- Located near and easily accessible to populations most needing support in times of disaster;

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of Health
- Lee County Department of Public Safety
- Municipal public safety/emergency management agencies
- United Way of Lee, Hendry, and Glades Counties
- Thrive Academy
- Lee County Volunteer Organizations Active in Disasters
- Health and mental health providers

- Operated by organizations that are known and trusted by the surrounding community and key emergency management stakeholders;
- Housed in a facility that is resilient to disaster and has appropriate mitigation features, including flood protection, resilient power, and wind-resistant roofing;
- Able to house critical supplies that support residents' life safety and wellbeing needs such as food, water, ice, charging stations, first aid supplies including some over-the-counter medicine, flashlights, and other community-identified aides; and
- Able to establish resilient communications to ensure residents can receive up to date information on disaster response and recovery issues and community condition.

A network of Resilience Hubs also has the potential to play a supportive role in connecting community members to services developed or proposed in other Initiatives. For example, Resilience Hubs can work in tandem with a mobile health network, helping connect residents in need with a unit that can provide services. For this objective, Hub operators would need strong working relationships with emergency managers and the ability to communicate and provide support to a mobile health response function (e.g., space to park the mobile health vehicle, electricity hook-up).

Need

Hurricane Ian disrupted communications, critical private sector services (e.g., closed grocery stores), and left many residents without easy access to everyday necessities such as food, water, and power. Residents who can independently bridge the gap between the initial aftermath of a disaster and the first 1-2 weeks of recovery can often avoid using and therefore placing additional demand on emergency services that are needed by those already in crisis.

Not every hurricane or disaster will be at the same intensity level as Hurricane Ian, nor will every disaster require widespread evacuation. Resilience Hubs would help residents who remain to stay safe in their neighborhoods as essential services are restored. Similarly, Resilience Hubs are a locally managed resource that can become an even more critical component of emergency management in situations where the disaster is localized, so there is limited or no state and federal support.

In situations where an emergency event is so severe that federal support is provided, FEMA may establish Disaster Recovery Centers (DRCs), which are accessible facilities and mobile offices residents can visit to learn more about FEMA and other disaster assistance programs. Resilience Hubs are not meant to fully replace services traditionally located within DRCs (or other points of service such as PODs or private sector and nonprofit service providers); some duplication is intended to provide redundancy. Duplication of services and supplies is on a limited scale and customized to the community to make them more accessible and improve overall resilience. FEMA also offers support scaled to the mission, including Disaster Survivor Assistance (DSA) crews who canvas neighborhoods to assist residents with registering for aid. While DRCs are larger and more centralized, DSA teams could be deployed to Hubs to fill a vital need.

Regional Approach

A County Resilience Hub network would identify existing community sites that meet facility/utility requirements, have the trust of their neighborhood, and agree to participate. In keeping with best practices, criteria for and selection of these sites would be based on feasibility and a community engagement effort to identify key needs of residents. The Lee County area has several assets that could be further developed to initiate a Resilience Hubs pilot project. Currently, United Way of Lee, Hendry, and Glades Counties (United Way) offers United Way Houses, which act as centralized locations for social services in known marginalized or underserved communities. In the County, these include Pine Manor, Harlem Heights, North Fort Myers, Lehigh, Charleston Park, Pine Island, North Fort Myers, South Fort Myers, Tice, Sanibel, Bonita Springs, San Carlos Park and Dunbar, among others. Each of the 18 Lee County United Way House locations offers social services provided by various partner agencies, based on the needs of that particular community.

Additionally, the United Way Houses already offer services such as emergency food; education programming like after-school tutoring, English as a second language, or GED classes; counseling services for domestic violence or mental health needs; financial literacy; case management; health and wellness services such as mobile clinics and health screening events; and access to programs like SNAP and direct assistance. If the needs of a family or individual are greater than what is initially provided at the United Way Houses, the locations also act as a connector to the United Way 211 information and referral hotline, so that those in need can be linked to the hundreds of available community resources in its database. Over 420,000 services were provided throughout the network of United Way Houses in 2022.

Lee County has a pre-existing relationship with United Way and the United Way Houses that could be further developed to support operations and strategic awareness needed to establish and maintain Resilience Hubs.

A successful Resilience Hub network would depend on a deep connection to the Lee County Emergency Operations Center and municipal emergency management agencies to facilitate regular planning, coordination, and connectivity before, during, and after a disaster.

Emergency management can also help:

- Evaluate and understand whether new mitigation features could be prioritized for these or other emerging Resilience Hub sites;
- Leverage the sites to promote the personal preparedness of nearby residents, integrating programming efforts conducted by Lee County Public Safety and/or municipal emergency management agencies; and
- Use the sites to inform situational awareness of community conditions in the Emergency Operations Center.

After the pilot program, lessons learned and community feedback could support a second phase including identifying other community sites that could serve as Resilience Hubs. Key potential sites include current social service providers and service-related non-profit buildings, cultural spaces, and community healthcare providers. Additionally, a key goal would be to ensure that all jurisdictions have appropriately placed Resilience Hubs in their areas. Achieving this may require additional planning and a cooperative needs assessment.

Impact

The desired result is a network of Resilience Hubs that allow residents to be sustained in the period after a disaster, bridging the gap between immediate response and the beginning of recovery. Because the Hub site is known and managed by a trusted community partner, residents will have familiarity with the Hub and be more inclined to use it. Emergency services use could be lessened, avoiding calls that could be better handled through the administration of first aid, provision of basic supplies or provision of services like charging stations, or through referrals and reiteration of key emergency messaging from trusted sources. Additionally, vulnerable populations – such as seniors and those with chronic conditions – might gain the help they need to avoid unnecessary displacement in the recovery period.

By coordinating and planning with Emergency Management and the Long-Term Recovery Group, the Resilient Hub Network Coordination will be able to integrate into response and recovery activities. If needed, FEMA Disaster Survivor Assistance teams can be brought in to help support in Resilience Hubs during gray skies.

Key Considerations

- The priority should be to bring existing buildings up to code to be resilient to disaster to return to service quickly.
- Community engagement to understand the needs of surrounding communities, define services, and promote use of the Hub is important and will support high utilization of sites and services.
- A clear public communication plan and/or time of event messaging that reconciles this new kind of asset with other assets, like shelters or DRCs, may also be important and support Hub utilization.
- Including Hubs in disaster-cycle planning and training will ensure effective implementation and integration of these sites into emergency response.
- Leveraging the Hub network to provide the residents and social-service providers awareness of other community supports that are open and operational after a disaster is a critical component of connecting those in need with services and increasing overall resilience. Similarly, the Hubs can be a source of information back to Emergency Operations Centers, contributing to situational awareness (i.e. Hubs serve as a two-way clearing house for understanding of what is functional in the area).
- Create sustainability planning of ownership and operation of system with funding. This would include consideration for agreements for designated purposes of blue and gray skies.
- Consider a program where all residents can quickly obtain direct emergency financial assistance (like a card) that can be funded before, during and after disaster.

Related Initiatives

- PC-002 Strengthening Emergency Logistical Resources
- IF-001 Diversify and Strengthen the Region's Emergency Shelter Network
- IF-002 Improving Evacuation Preparedness
- IF-004 Hardening Critical Facilities and Systems
- IF-005 Fortifying Essential Services and Facilities

- IF-006 Rebuilding Resilient Communications Infrastructure
- EW-001 Accessing Early Learning
- EW-002 Expanding Out of School Programming
- HS-002 Creating a Resilient Healthcare System from Critical Infrastructure through Essential Services
- HS-003 Creating a Mobile Health Clinic System
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector
- CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector

Funding Sources

- Federal Emergency Management Agency
- United States Department of Health and Human Services
- United States Department of Transportation
- Florida Division of Emergency Management
- Florida Department of Health
- Florida Department of Children and Families
- Florida Department of Transportation

Resources

- [UW Houses Map - Google My Maps](#)



CULTURAL RESOURCES

Initiatives



Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector

Establish a partnership of regional Art and Culture Organizations composed of arts leaders to support and advocate for the local creative industry.

CR-001

Objective:

The arts culturally and economically help to define and support the County’s reputation, quality of life, and vibrancy. The arts and culture community includes a diverse set of employers, producers, visionaries, and consumers who collectively are a critical component of the tourism economy, which generates revenue for state and local governments; “The nonprofit arts and culture sector is a \$140.1 million industry in Lee County—one that supports 3,875 full-time equivalent jobs and generates \$18.8 million in local and state government revenue.”²⁹ Additionally, the arts and culture sector provides joy to patrons and inspiration to students.

This Initiative proposes to formalize the crucial role that the arts and culture community plays in enriching Lee County and its municipalities by providing a platform to advise, advocate, and coordinate for the arts in the recovery process and on an ongoing basis. The partnership could be involved in implementing the following recovery Initiatives:

- Participating in the Resilience Hub Network (H&SS 02);
- Participating in the Regional Development of a Continuity of Operations Hub (ER02);
- Advising the Region on the Continued Support of Public Art and Cultural Events (CR05);
- Coordinating and Advocating for Capital Funding for Art and Cultural Institutions (CR01); and
- Supporting the Reviving of Public Recreation in the Region (CR03).

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of State, Division of Cultural Affairs
- Lee County Visitor and Convention Bureau
- Municipal experts in arts and culture sector
- Nonprofit organizations in the arts and culture sector
- Historic preservation organizations in Lee County
- Public-oriented science and humanities institutions in Lee County

²⁹ Americans for the Arts, a nonprofit organization dedicated to building recognition for the value of arts and creative networks nationwide, conducted a 2015 Arts and Economic Prosperity[®] 5 study that included a Lee County Arts and Economic Prosperity Report from which this data is derived.

Need

After more than 7 years of disruptions to the tourism industry, the arts and culture sector has stepped up in many ways to support the region in recovery efforts in everything from distributing food and staging debris to creating a sense of normalcy and additional opportunities attract and entertain visitors' post-disaster. However, the sector has not been immune to the challenges created by the ongoing disruptions. Hurricane Ian was devastating to the regional arts and culture community in many ways. Some examples of storm damages include: the massive flood inundation and roof damage to Florida Repertory Theatre in downtown Fort Myers resulting in financial hardship; the Cultural Park Theatre and the Sanibel Historical Museum and Village shuttering for several months causing lost revenue; and the historic and symbolic Sanibel Lighthouse lost a support leg and sustained other damages. Another historic site, the Cape Coral Yacht Club located on the Caloosahatchee River, provided facilities and amenities including the public beach, a fishing pier, a community pool, and a boat launch until Hurricane Ian ravaged it, leaving damage that will take years to rebuild.

Recovery and establishing a strong partnership to ensure long-term resilience should happen more strategically to coordinate and support collaboration among sector leaders across the jurisdictions. A representative partnership could provide support and insight on recovery priorities and needs as well as help respond to other unexpected changes that impact the arts and culture sector over time. The partnership would be dedicated to supporting and strengthening the arts and culture sector while also articulating the contribution made by the cultural community to the County's economic vitality. The partnership should be convened by a trusted, neutral third-party using a process for stakeholder engagement and collaborating to action. Additionally, a member from the partnership could be a liaison for cultural resources in the Emergency Operations Center after the impact of a disaster.

Regional Approach

Art and culture improve the quality of life of the County residents, enrich students' understanding of humanity, provide rewarding jobs, and contribute to diversifying the economy. From Hurricane Ian's destruction of the funky artist village in Matlacha, to the downturn of attendance of live performances during the COVID-19 pandemic, this resilient community has come together across jurisdictional lines to support one another as they revitalize and reinvent. To continue these efforts, the regional partnership of arts and culture organizations could help with the following:

- Identify cross jurisdictional funding opportunities;
- Elevate needs of the community and provide a place for artisans to bring concerns;
- Provide a forum for cross-jurisdictional issues like workforce housing for artists;
- Monitor and assess the vitality of the arts and culture sector; and
- Define and inform the approach to supporting arts across the area.

The cultural and artistic community could identify its own leaders, form a communication channel with points of contact, and be unified in the coordination of leveraging their strengths, supporting small businesses, and making their resource requests. The partnership can also be a forum for establishing shared goals, facilitating a process for collaboration, forming partnerships, and continuing to build the network.

Impact

Consensus representation from the cultural and artistic community through a regional group would add value to the area and County through their expertise and creativity in recovery problem solving. The partnership would organize and connect active participants in recovery, resiliency, and long-term planning conversations. The partnership would also build goodwill throughout the artistic sector as artists' contribution to the region are given greater credence, which facilitates getting resources they need to flourish as economic drivers. The arts and culture partnership would be able to identify vulnerabilities and capacities within its community. As this community demonstrated in the aftermath of Hurricane Ian by working with Emergency Management to provide logistic swing spaces and gathering places, it has the potential to be a significant stakeholder in the Resiliency Hub Network and the coordination between this community and public safety in blue skies as well as during hazardous times. The opportunity exists to develop a successful regional arts and cultural partnership, ensuring that all jurisdictions and large and small institutions are well represented in any conversation and opportunities for funding.

Key Considerations

- Conduct outreach, engage stakeholders, and establish community partnerships.
- Determine the scale and definition of the community; create a partnership that is inclusive and reflective of the following:
 - The interconnectedness between the arts, the economy, the workforce, and education;
 - Stakeholders in the visual, literary, and performing arts;
 - Public-oriented science and humanities institutions, including zoos, botanical gardens, and historic and preservation societies;
 - A neutral third-party (non-governmental) to convene and coordinate the shared work among the partnership;
 - Representatives from local government; and
 - Creative artists at all skill levels who live and work within the County.
- Determine the structure and decision-making process of the Group once it is established.
- Outline the means to strengthen communication between the arts and culture sector and government.
- Use the regular, reoccurring arts and culture assessment as well as regularly analyzing the economic impact this community has in the County to drive strategy.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- NR-006 Reviving Public Recreation
- NR-007 Supporting Natural Resources Community Outreach and Education
- HG-007 Exploring Mixed-Use Development Opportunities
- ER-003 Building Continuity of Operations for Regional Businesses
- ER-004 Supporting a Diverse and Resilient Economy
- HS-004 Establishing a Community Resilience Hubs Network
- CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector
- CR-003 Advancing Public Art While Rebuilding

Funding Sources

- Institute of Museum and Library Science
- National Endowment for the Arts
- National Endowment for the Humanities
- National Institute of Mental Health (NIMH)
- National Institute on Aging (NIA)
- National Assembly of State Arts Agencies
- United States Department of Health and Human Services
- United States Department of Veterans Affairs
- South Arts
- Florida Division of Arts and Culture
- Arts and Innovation Management
- Many private foundations who support arts and culture

Resources

- [Arts & Economic Prosperity® 5 - Alliance for the Arts \(artinlee.org\)](https://artinlee.org)

Coordinating Capital Funding for a Resilient Arts and Culture Sector

The arts and culture sector within Lee County seeks to establish sustainable funding to implement capital improvements and the rehabilitation of cultural and historic sites that were damaged by Hurricane Ian to increase the vitality of these sites that enrich the County through tourist attraction and contributions to the local economy.

CR-002

Objective

The partnership of arts and culture organizations to create a more resilient sector seeks to secure long-term sustainable funding to rehabilitate and improve cultural and historic sites, in addition to obtaining funding to bolster arts and cultural organizations that provide services and enrich the County, community members, and visitors. The successful receipt of funding and the establishment and expansion of grant programs will achieve sustainable and impactful investments in the arts and culture sector and grow the contributions of the sector to the County's economy.

To effectively improve arts and cultural sites, the Regional Arts and Culture Partnership, once established, will work to secure funding, and identify and prioritize facilities that require rehabilitation and hardening. Both entities will engage stakeholders to develop funding guidelines, scopes of work, process applications, and determine awards. To the extent that the facilities are nonprofit and otherwise qualify for federal programs, facilities could be considered as part of the Local Mitigation Strategy (LMS).

To augment the availability of sustainable services, the Regional Arts and Culture Partnership will work with stakeholders to identify needs and gaps in arts and cultural services to prioritize resources and funding for critical services and programs that should be expanded. The Regional Arts and Culture Partnership will work with stakeholders to assess sustainable funding solutions from established grant programs, private foundations, and new investors.

Co-Sponsoring Branches:



Stakeholders:

- Florida Department of State, Division of Cultural Affairs
- Lee County Visitor and Convention Bureau
- Municipal governments in Lee County
- Arts and cultural institutions and organizations in Lee County
- Historic preservation organizations in Lee County

Programs and services provided by arts and cultural organizations may include, but are not limited to:

- Shared office and rehearsal spaces;
- Revolving loan funds for capital improvements;
- Technical assistance programs for emerging theatres and galleries;
- Direct administrative support;
- Training in fundraising and the visa process;
- Tax and legal assistance;
- Mentorship; and
- A reuse center to provide opportunities for companies and individuals to donate unneeded supplies to nonprofit organizations with arts programming and public schools.

Funding shall first invest in rehabilitation and recovery efforts so that the arts and culture institutions and organizations can contribute to economic recovery and community resilience, and then stakeholders shall seek to invest in supporting the arts and culture community's services and address gaps to further long-term strategic goals.

Need

More than a dozen historic and cultural assets in the County were impacted and/or severely damaged by Hurricane Ian leading to reduced access to resources and the inhibited connection and enrichment that community members receive through the various services programs provided by these sites. Exemplifying this, numerous theatres experienced damage, closures, and significant revenue loss, in addition to the personal impacts felt by the cast and production staff that compounded the reopening of programs. The iconic Sanibel Lighthouse, a historic cornerstone of the community, was severely damaged from the hurricane and required repairs, and Sanibel's historic Lighthouse Keepers Cottages were destroyed. Museums and gardens were also adversely impacted resulting in the loss of unique plant and animal species they housed.

Arts, historic, and cultural sites promote tourism and advance economic growth in alignment with long-term objectives of the County following Hurricane Ian. Moreover, assets, like libraries, deliver necessary services to community members that enhance individual and community recovery (e.g., supporting job application review, learning programs, and programs for children). Further underscoring the importance of these assets to the community's resilience to future disasters, libraries support access for residents to Lee County's emergency services. Following Hurricane Ian, libraries relayed critical recovery updates and hosted access to local resources available to community members. Bolstering funding for the arts and culture community will augment and sustain access to these sites and services that are critical to advancing individual and community recovery objectives.

Regional Approach

Arts, historic, and cultural assets deliver meaningful impacts to all, regardless of jurisdictional boundaries. Common best practices prove that implementing a broad base of leaders and stakeholders to oversee arts, historical, and cultural resources is vital to success. No singular funding stream is likely to fund the entirety of

identified needs. Strategic planning and collaboration among jurisdictions and stakeholders can benefit and support larger community needs in addition to encouraging economic development and government and philanthropic funding for future services and infrastructure resilience.

Several Countywide strategic plans (e.g., Hazard Identification and Risk Assessment and Joint Local Mitigation Strategy) identify the importance of cultural resources to the community. The plans outline opportunities to protect existing assets and foster new cultural and arts institutions and attractions. It is recommended the department review the strategic frameworks included in these plans to align future opportunities with previously identified objectives, explore a meaningful scope of work for the Regional Arts and Culture Partnership in collaboration with municipal jurisdictions and stakeholder groups, and pinpoint critical stakeholders to support funding opportunity pursuit to benefit rehabilitation of Arts and Culture Community assets and programs.

Impact

Securing long-term funding to rehabilitate and expand arts and cultural assets, including the various service programming they provide, will allow these assets to flourish and contribute to the economic growth and resilience of Lee County and local municipalities.

Key Considerations

- Harden arts and culture facilities that are part of Resilience Hub System (providing necessary services).
- Poll arts organizations for their deferred maintenance needs considering the increased vulnerability of impacts during disasters due to deferred maintenance.
- Utilize Federal, state, and local coordination and resources to preserve historical buildings, artifacts, and archives.
- Review existing funding/grant mechanisms and consider expanding programs to include recovery and resilience program options:
 - Amount of funding provided to arts and cultural institutional facilities through public and private sources for repairs (both short-term repairs and permanent and mitigation repairs);
 - Number of arts and cultural institutional facilities that have undertaken recent capital repairs; and
 - Funding programs and amounts provided to the arts and culture community for arts-related social services and programs.

Related Initiatives

- ER-003 Building Continuity of Operations for Regional Businesses
- ER-004 Supporting a Diverse and Resilient Economy
- HS-004 Establishing a Community Resilience Hubs Network
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector
- CR-003 Advancing Public Art While Rebuilding

Funding Sources

- Institute of Museum and Library Services
- Federal Emergency Management Agency - Cora Brown Fund
- United States Department of Education
- United States Department of Health and Human Services
- United States Department of Veterans Affairs
- National Endowment for the Arts
- National Endowment for the Humanities
- The Smithsonian Cultural Research Initiative Heritage Emergency National Task Force
- United States Small Business Administration
- Florida Division of Arts and Culture
- Lee County Arts Council Grassroots Grants Program
- Lee County Tourism Development Council
- Private and Nonprofit Organizations:
 - Bloomberg Philanthropies, Arts Innovation and Management
 - Craft Emergency Relief Fund (CERF+)
 - Alliance for the Arts

Resources

- ArtsReady [Landing Page – Plan](#)
- [CERF+ | The Artist's Safety Net \(cerfplus.org\)](#)
- [HENTF - Smithsonian Cultural Rescue Initiative \(si.edu\)](#)
- [Response and Recovery Resources - Smithsonian Cultural Rescue Initiative \(si.edu\)](#)
- [Lee County Library System \(leegov.com\)](#)

Advancing Public Art While Rebuilding

Integrate public art into new and repaired infrastructure.

CR-003

Objective

Integrate art into infrastructure during the rebuilding process to employ the arts and culture workforce, continue to attract visitors, and ensure the County remains a unique and beautiful area for all residents. Rebuilding damaged infrastructure and community facilities is a complex process that not only requires input from stakeholders traditionally involved (e.g., policy makers, engineers, planners, investors, developers) but also offers opportunities to rebuild in a way that advances more than one sector. The arts and culture community contributes significantly to the tourism sector and quality of life within the County. Many municipalities around the region have successfully incorporated art around or into their infrastructure, which creates a draw for visitors and an amenity for residents. The practice of incorporating art into everyday infrastructure is sometimes referred to as “placemaking” and can have many positive benefits such as improved public safety, well-being, and employment opportunities. The arts and culture community can be integrated into the infrastructure planning and rebuilding process to identify opportunities for unique beautification and ultimately assist with building back in a resilient manner, returning infrastructure to pre-Ian conditions, and maximizing the benefits of placemaking.

Need

Some of the areas impacted by Hurricane Ian housed public art elements, which were severely damaged and/or destroyed by the storm. Some of the key cultural resource assets that were damaged include the Cape Coral Yacht Club, Florida Repertory Theatre, Cultural Park Theatre, The Fort Myers Beach Art Association and Gallery, New Phoenix Theatre, the Sanibel Historical Museum and

Co-Sponsoring Branches:



Stakeholders:

- Municipal experts in the arts and culture sector
- Arts and cultural institutions and organizations in Lee County
- Volunteer organizations active in disasters

Village, Big Arts Sanibel Island, the Bailey-Matthews Shell Museum, The Shell Factory and Nature Park, and the Edison and Ford Winter Estates, to name a few. Impacts to these facilities also affected the arts and cultural workforce, creating the need for interim opportunities and financial support.

Regional Approach

Coordination between infrastructure, economic, environmental, and arts and cultural stakeholders is needed to identify and implement impactful placemaking projects that help restore the community to pre-hurricane conditions and reflect and support the vibrancy of the region. Developing a comprehensive strategy that is inclusive of arts and cultural areas and institutions throughout the County can increase sector resilience across the region and economically benefit a multitude of stakeholders including those in the tourism, hospitality, retail, and arts sectors.

Integrating art into infrastructure can make construction aesthetically pleasing for residents and visitors. Permanent and temporary art installations of sculptures and various other pieces are popular in areas ranging from North Fort Myers to Fort Myers Beach and Sanibel; restoring these installations and/or expanding them to increase community identity and provide additional attractions could be included in the rebuilding process.

Similarly, integrating art into the regional LeeTran bus network is one way that decision-makers can promote art advancement throughout the County, reaching various hubs. Municipal organizations, like Bonita Springs and Fort Myers Art in Public Places, within the region have preexisting sculptures and artwork dispersed around their municipalities ultimately becoming a focal point of the cities. Other forms of public art that can be considered are murals, fountains, street furniture, and landmarks.

A vibrant program to integrate art into infrastructure can also generate employment opportunities and attract the artist workforce to the area. Another tactic for accomplishing this Initiative could potentially be to create an artist in residence in government program to integrate artists more formally into planning processes, incentivize innovation, and highlight the unique talents of the County workforce.

Incorporating art that reflects the diverse community within the Lee County region is also a way to center the voices and needs of the people who use these systems every day. Art can be created directly by artists of the Lee County community, designed to reflect all cultures within the County, and/or created through novel community participation methods. Expansion of public art and related programming into areas that currently have little to no formal placemaking installations may also provide low- to moderate-income or otherwise marginalized community members with more access to experience the arts.

Creating an arts and cultural partnership, with representation from the municipalities and unincorporated areas, to oversee the implementation of effective measures can help ensure that efforts are considerate of the whole community and region.

While art is traditionally incorporated into built infrastructure, there are also opportunities to integrate with Natural Resources Initiatives and Parks. The County currently offers a webcam program to showcase natural species in their habitats and preview waterways. The Calusa Blueway Paddling Trail was developed to attract outdoorsy travelers to waters throughout the region, but it needs infrastructure enhancement throughout the

190 miles of shoreline; this is another opportunity to integrate art and perhaps natural resources education for a unique experience.

Impact

Integrating art into the infrastructure rebuilding process will allow new structures to be designed in a way that maintains or enhances their pre-storm character, maximizes the benefits of living in beautiful spaces, and creates new arts and cultural job opportunities. Involving arts and cultural organizations in the planning of infrastructure projects can allow for the incorporation and integration of new spaces and ultimately make them more desirable, walkable, and accessible for residents and visitors. Coordinating efforts at the regional level will help provide opportunities throughout all areas of and communities with the County.

Key Considerations

- Consider including arts and culture as a part of all regional strategic planning efforts.
- Consider identifying new ways to bring infrastructure developments to life as new projects are proposed and aligned with funding.
- Consider designating an existing or new arts and cultural working group to oversee the implementation of this Initiative.
- Consider exploring all potential sources of funding, including a mix of private and public investments as well as continuous financing. For example, tax waivers or incentives may be offered, permits enabled, funding from government agencies pursued, and private investments made.
- Develop a plan for continued financing to ensure the sustainability of the Initiative. This could mean private investment each year, tax waivers and incentives, as well as other fees generated by the district as a whole or its various parts, such as admissions from a performing arts center, art festivals, theaters, or other events.
- Consider retention of artists who may have lived in the art and culture district. Additional housing support may be required if the district itself becomes a fashionable and expensive place to live and work.
- Public art should be integrated into the conversations into both infrastructure and economic development conversations. The private sector business community should also be involved in the conversation on public art.

Related Initiatives

- IF-003 Developing Resilient Transportation by Mitigating and Modernizing Infrastructure and Expanding Mobility Options
- NR-006 Reviving Public Recreation
- NR-007 Supporting Natural Resources Community Outreach and Education
- ER-004 Supporting a Diverse and Resilient Economy
- CR-001 Establishing a Partnership of Arts and Culture Organizations to Create a More Resilient Sector
- CR-002 Coordinating Capital Funding for a Resilient Arts and Culture Sector

Funding Sources

- National Endowment for the Arts (NEA)
- National Endowment for the Humanities (NEH)
- United States Department of Transportation
- National Assembly of State Arts Agencies
- United States Department of Health and Human Services
- United States Department of Veterans Affairs
- Florida Division of Arts and Culture
- Florida Department of Transportation
- Private and nonprofit funding organizations:
- Bloomberg Philanthropies, Arts Innovation and Management
- Craft Emergency Relief Fund
- South Arts
- Florida Division of Arts and Culture
- Arts and Innovation Management



APPENDICES

Appendix A: Fund Mapping Chart

BRANCH IDENTIFICATION AND INITIATIVE ABBREVIATION KEY

 PLANNING & CAPACITY PC-000	 ECONOMIC RECOVERY ER-000	 EDUCATION & WORKFORCE EW-000	 HEALTH & SOCIAL SERVICES HS-000
 INFRASTRUCTURE IF-000	 HOUSING HG-000	 NATURAL RESOURCES NR-000	 CULTURAL RESOURCES CR-000

The following table identifies federal grant funding opportunities within the Infrastructure Investment and Jobs Act (IIJA), Inflation Reduction Act (IRA), and the Consolidated Appropriations Act, 2023 (CAA) and maps them to align with the objectives outlined in the Initiatives. This information is not a guarantee of eligibility.

FEDERAL GRANT FUDING OPPORTUNITIES

Source	Program	Branch	Initiative	Cost Share	Grant Type
EPA	Climate Pollution Reduction Grants (Implementation and Planning)	PC	PC-001	NO	Competitive
DOT / FTA	Grants for Planning, Feasibility Analysis, and Revenue Forecasting (Bridge Investment Program Set-aside)	PC	IF-003 IF-004	YES	Competitive
DOT	Innovative Coordinated Access and Mobility	PC	IF-003	YES	Competitive
DOT	Neighborhood Access and Equity Grant Program - Community Planning Grants	PC	IF-003	YES	Discretionary
DOT	Neighborhood Access and Equity Grant Program - Capital Construction Grants	PC	IF-003	YES	Discretionary
DOT	NAE Community Planning, Capital Construction, and Regional Partnerships Challenge Grants	PC	IF-003 IF-004	YES	Discretionary
DOT	On the Job State Training Program	PC	ER-004 EW-002 EW-003	NO	Competitive following allocation
DOE	Renew America's Schools Grant Program	PC	IF-001 HS-004	YES	Competitive
DOT	State Transportation Planning Grant Program	PC	IF-003 HG-007	YES	Formula based
DOE	Assistance for Latest and Zero Building Energy Code Adoption Grant Program	PC	IF-007 HG-001 HG-006 HG-007	YES	Code Building Grant

Source	Program	Branch	Initiative	Cost Share	Grant Type
FEMA	Flood Mitigation Assistance (FMA) Grants	PC	PC-001 PC-004 IF-003 IF-007 IF-009 IF-010 NR-001 NR-002 NR-003 NR-005 HG-001 HG-004 ER-001 HS-002 HS-004 CR-001 CR-002	VARIABLES	Subaward types: <ul style="list-style-type: none"> • Community Flood Mitigation Projects • Individual Structure/Property-Level Flood Mitigation Projects • Project Scoping • Technical Assistance • Flood Mitigation Planning Activities
DOT	Thriving Communities Grant Program	PC	IF-003 IF-005 IF-006 IF-008 IF-009 HG-007 ER-001 CR-001 CR-003	NO	Competitive
EDA	EDA FY 2023 Disaster Supplemental Program	ER	PC-001 PC-002 PC-003 PC-004 IF-001 IF-002 IF-004 IF-005 IF-006 IF-008 IF-009 IF-010 NR-002 NR-003 HG-007 ER-001 ER-002 ER-003 ER-004 EW-004 HS-002 HS-004	YES	Cooperative Agreement / Grant
EDA	EDA's 2023 Build to Scale - Venture Challenge	ER	PC-001 PC-003 HG-007 ER-002 ER-003 ER-004	YES	Competitive

Source	Program	Branch	Initiative	Cost Share	Grant Type
EDA	EDA's 2023 Build to Scale - Capital Challenge	ER	HG-007 ER-002 ER-004	YES	Competitive
USDA	Urban and Community Forestry Assistance Grant Program	EW	NR-001 NR-003 NR-005 NR-007 CR-002	YES	Competitive
FTA	Enhanced Mobility of Seniors and Individuals with Disabilities Program	HS	IF-003	YES	May be formula-based, competitive or discretionary
FTA	Capital Investments Grant Program	IF	IF-003	YES	Discretionary
DOE	BIL Grid Resilience and Innovation Partnerships	IF	IF-007	NO	Competitive
DOT	Bridge Rehabilitation and Replacement Grant Program	IF	IF-003	NO	Formula based
FEMA	Building Resilient Infrastructure and Communities	IF	IF-003 IF-004 IF-005 IF-006 IF-008 IF-009 IF-010 NR-001 NR-002 NR-003	YES	Grant
FTA	Bus and Bus Facilities Formula Grants	IF	IF-003	YES	Formula based
EPA	Clean School Bus Grant Program	IF	IF-003	NO	Competitive
DOT	Consolidated Rail Infrastructure and Safety Improvements Grant Program	IF	maybe IF-003	YES	Competitive
DEP	Drinking Water State Revolving Funds (DWSRF)	IF	IF-008	NO	Grants and Loans
DOE	Energy Efficiency and Conservation Block Grant Program	IF	PC-004 IF-003 IF-004 IF-005 IF-007 HG-003 HG-005 HG-006 HG-007 HS-002	NO	Formula, Competitive, and Vouchers
DOE	Energy Efficiency Revolving Loan Fund Capitalization Grant Program	IF	IF-007 HG-003 HG-005 HG-006 HG-007	NO	Formula
DOE	Energy Infrastructure Reinvestment Financing (Loan) Program	IF	IF-007	NO	Loan
DOE	Enhanced Geothermal Systems and Pilot Demonstrations Grant Program	IF	IF-007	YES	Competitive research grant
DOE	Grants to Facilitate the Siting of Interstate Electricity Transmission Lines Program	IF	IF-007	TBD	Discretionary

Source	Program	Branch	Initiative	Cost Share	Grant Type
DOT	Multimodal Project Discretionary Grant Program (MPDG) - Mega	IF	IF-003 IF-004	YES	Discretionary/Competitive
DOT	Multimodal Project Discretionary Grant Program (MPDG) - INFRA	IF	IF-003 IF-004	YES	Discretionary/Competitive
DOT	Multimodal Project Discretionary Grant Program (MPDG) - Rural	IF	IF-003 IF-004	YES	Discretionary/Competitive
DOT	National Electric Vehicle Infrastructure Formula Grant Program	IF	IF-003	YES	Formula
NHTSA	National Priority Safety Programs (many programs)	IF	IF-003	VARIABLES	State Grant Programs
DOT	Pilot Program for Transit-Oriented Development Planning Program	IF	IF-003 HG-007	YES	Competitive
DOT	Port Infrastructure Development Program (PIDP)	IF	IF-004 IF-010	YES	Discretionary (competitive)
DOE	Preventing Outages and Enhancing the Resilience of the Electric Grid	IF	IF-007	YES	Formula
DOT	Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Discretionary Grant Program: At-Risk Coastal Infrastructure Grants	IF	IF-004 IF-010 NR-001 NR-002 NR-003	YES	Discretionary
EDA	Public Works and Economic Adjustment Program - Public Works Grant	IF	PC-004 IF-004 IF-005 IF-006 IF-003 IF-007 IF-008 IF-009 IF-010 NR-001 NR-002 NR-003 ER-004 EW-004	YES	Competitive
EDA	Public Works and Economic Adjustment Program - Economic Adjustment Assistance Grants:	IF	PC-001 IF-003 IF-004 IF-005 IF-006 IF-007 IF-008 IF-009 IF-010 NR-001 NR-002 NR-003 ER-002 ER-004 EW-004	YES	Competitive

Source	Program	Branch	Initiative	Cost Share	Grant Type
DOT	Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program - Capital Project Grants	IF	IF-003 IF-004 IF-005 IF-010 NR-001 NR-002 NR-003 NR-004	YES	Competitive
DOT	Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program - Planning Grants	IF	IF-003 IF-010	YES	Competitive
DOE	Renew America's Schools Grant Program	IF	IF-001	YES	Competitive
DOE	Smart Grid Investment Matching Grant Program	IF	IF-003 IF-006 IF-007	YES	Competitive
DOE	State Energy Program	IF	IF-003 IF-007	NO	Formula
DOT	State of Good Repair Formula Grants Program	IF	IF-003	YES	Formula
DOT	Statewide Transportation Planning Grant Program	IF	IF-003	YES	Formula
DOT	Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program	IF	IF-003	YES/NO	Competitive
DOT	Urbanized Area Formula Grant Program	IF	IF-003	YES	Formula
EPA	Water Infrastructure Improvements for the Nation, Small and Underserved, and Disadvantaged Communities Grant Program	IF	IF-008	YES	Noncompetitive/Voluntary Grant Program
USDA	Watershed Rehabilitation Grant Program	IF	NR-002	YES	Competitive
DOT	Congestion Relief Program	IF	IF-003	YES	Competitive
DOI	DOI Working Capital Fund	IF	NR-001 NR-003 NR-004	N/A	Working Capital Fund
DOT	Highway Safety Research and Development Program	IF	IF-003	NO	Discretionary Grant/Cooperative Agreements Program
DOT	High Priority Activities Program - Commercial Motor Vehicle (CMV)	IF	IF-003	NO	Competitive/discretionary
DOT	High Priority Activities Program - Innovative Technology Deployment (ITD) Program	IF	IF-003	YES	Competitive/discretionary
DOT	Active Transportation Infrastructure Investment Grant Program	IF	IF-003 CR-002	TBD	Competitive
DOT	All Stations Accessibility Grant Program	IF	IF-003	YES	Competitive Grant Program Planning Grants Construction Grants
DOT	Bridge Investment Program	IF	IF-003 IF-004 IF-010 NR-004	YES	Competitive
DOT	Buses and Bus Facilities Grants Program	IF	IF-003	YES	Competitive
DOT	Charging and Fueling Infrastructure (CFI) Grant Program Overview (Community Charging)	IF	IF-003	YES	Discretionary/Competitive Cost Reimbursement

Source	Program	Branch	Initiative	Cost Share	Grant Type
DOT	CFI Discretionary Grant Program (Corridor Charging) Program	IF	IF-003	YES	Discretionary and Competitive Cost Reimbursement Grant
USDA	Community Connect Grant Program	IF	IF-001 IF-006 HS-004	YES	Discretionary
EPA	Diesel Emissions Reduction Act Grant Program	IF	IF-003	YES	Allocation by State
DOT	Low or No Emission Grants Program	IF	IF-003	YES	Competitive
DOT	Reconnecting Communities Pilot Grant Program	IF	IF-003 HG-007	YES	Discretionary/Competitive
DOT	Safe Streets and Roads for All Grant Program	IF	IF-003	YES	grant
USDA	Water and Waste Disposal Loan and Grant Program	IF	IF-008 IF-009 NR-002 NR-003/NR-001	YES	Competitive
EPA	Water Infrastructure Finance and Innovation Act (WIFIA) Grant Program	IF	IF-008 IF-009 NR-001 NR-002 NR-003	YES	Federal Credit Program
HHS	Low Income Home Energy Assistance Program (State) IIJA Grant Program	HG	HG-003 HG-005	N/A	Block
DOE	Weatherization Assistance Program	HG	HG-005 HG-006 HG-007	N/A	Formula Grant
DOE	Building Codes Implementation for Efficiency and Resilience	NR	HG-001 HG-005 HG-006	NO	Competitive
EPA	Funding to Address Air Pollution (incl. Multipollutant Monitoring, Fenceline Monitoring, and Air Quality Sensors)	NR	HG-005 HG-006 HG-007	NO	Grant
FEMA	Hazard Mitigation Revolving Loan Funds/Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act	NR	IF-003 IF-004 IF-005 IF-006 IF-008 IF-009 IF-010 NR-001 NR-002 NR-003 HG-005	YES	Competitive

Source	Program	Branch	Initiative	Cost Share	Grant Type
NOAA	Investing in Coastal Communities and Climate Resilience Grant Program	NR	PC-001 IF-004 IF-005 IF-008 IF-009 IF-010 NR-001 NR-002 NR-003 NR-005 NR-007 EW-004 HG-001 HG-004		
NOAA	Ocean and Coastal Observing Systems	NR	NR-001 NR-002 NR-003	NO	Various
EPA / FL DEP	Clean Water State Revolving Fund Program (w/ Emerging Contaminants)	NR	IF-008 IF-009 IF-010 NR-001 NR-002 NR-003	YES	Various
NOAA	Coastal Zone Management Program	NR	NR-001 NR-004 NR-005	NO	Competitive
NWF	Environmental And Climate Justice Block Grants	NR	EW-004	N/A	Discretionary (competitive).
FAA	Fueling Aviation Sustainable Transition Low-Emission Aviation Technologies (FAST-Tech)	NR	IF-003	YES	Competitive
FAA	Fueling Aviation Sustainable Transition via Sustainable Aviation Fuels (FAST-SAF) Program	NR	IF-003	YES	Competitive
EPA	Geographic Initiatives Grant Program (South Florida)	NR	NR-001 NR-002 NR-003 NR-004	YES	Discretionary
HUD	Green and Resilient Retrofit Comprehensive (GRRPC) Program	NR	IF-008 HG-003 HG-005 HG-006	YES	Competitive
HUD	Green and Resilient Retrofit Leading Edge (GRRPL) Program	NR	IF-008 HG-003 HG-005 HG-006	NO	Competitive
DOT	National Culvert Removal, Replacement, and Restoration Grant Program	NR	IF-010 NR-001 NR-003 NR-004	YES	Competitive
NOAA	Transformational Habitat Restoration and Coastal Resilience	NR	IF-010 NR-001 NR-003 NR-004	NO	Competitive

Source	Program	Branch	Initiative	Cost Share	Grant Type
NFWF	National Oceans and Coastal Security Fund	NR	NR-001 NR-003	NO	Grant
USACE	Water-Related Environmental Infrastructure Assistance	NR	IF-009 NR-002 NR-003	YES	Direct Federal Spending
NOAA	NOAA Broad Agency Announcement (BAA)	NR	PC-004 IF-008 IF-009 IF-010 NR-001 NR-002 NR-003 NR-004 NR-005 NR-007	NO	Competitive

Appendix B: Acronyms

The following table identifies the acronyms used in this document.

Acronym	Definition
AAR	After-Action Report
ADA	Americans with Disabilities Acts
AMI	Area Median Income
ARPA	American Rescue Plan Act
BMAP	Basin Management Action Plan
BOCC	Board of County Commissioners
BRIC	Building Resilient Infrastructure and Communities
CARES	Coronavirus Aid, Relief, and Economic Security
CDBG	Community Development Block Grant
CDBG-DR	Community Development Block Grant-Disaster Recovery
CDFI	Community Development Financial Institutions
CEMP	Comprehensive Emergency Management Plans
CERF	Craft Emergency Relief Fund
CIP	Capital Improvement Plans
CLEAR	Conservation Lands, Easements, and Recreation
CLT	Community Land Trust
COOP	Continuity of Cooperations Planning
COVID	Coronavirus Disease
CRS	Community Rating System
DEP	Department of Environmental Protection

Acronym	Definition
DOE	Department of Energy
DOT	Department of Transportation
EDA	Economic Development Administration
EPA	Environmental Protection Agency
EDO	Economic Development Office
EM	Emergency Management
EOC	Emergency Operations Center
EPP	Emergency Power Plans
FAA	Federal Aviation Administration
FAFSA	Free Application for Student Aid
FBO	Faith-Based Organization
FDEM	Florida Division of Emergency Management
FEMA	Federal Emergency Management Agency
FGCU	Florida Gulf Coast University
FHA	Federal Housing Administration
FHWA	Federal Highway Administration
FMA	Flood Mitigation Assistance
FPL	Florida Power and Light
F-ROC	Florida Recovery Obligation Calculation
FTA	Federal Transit Administration
FTZ	Foreign Trade Zones
FY	Fiscal Year

Acronym	Definition
GIS	Geographic Information System
HHS	Department of Health and Human Services
HMGP	Hazard Mitigation Grant Program
HOME	Department of Housing and Urban Development HOME Investment Partnerships Program
HUD	US Department of Housing and Urban Development
HVAC	Heating, Ventilation, and Air Conditioning
IIJA	Infrastructure Investment and Jobs Acts
IRA	Inflation Reduction Act
LCEC	Lee County Electric Cooperative
LEO	Low Earth Orbit
LLC	Limited Liability Corporation
LMI	Low to Moderate Income
LMS	Local Mitigation Strategy
LTR	Long-Term Recovery
MOU	Memorandum of Understanding
NDRF	National Disaster Recovery Framework
NEA	National Endowment for the Arts
NEH	National Endowment for the Humanities
NHTSA	National Highway Traffic Safety Administration
NIA	National Institute on Aging
NIMH	National Institute of Mental Health
NFIP	National Flood Insurance Program

Acronym	Definition
NFWF	National Fish and Wildlife Foundation
NOAA	National Oceanic and Atmospheric Administration
NSP	Neighborhood Stabilization Program
NWF	National Wildlife Federation
OTT	On the Table
PA	Public Assistance
POD	Points of Distribution
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RERI	Regional Economic Research Institute
RTP	Recovery Task Force
SAMHSA	Substance Abuse and Mental Health Services Administration
SBA	Small Business Administration
SBDC	Small Business Development Center
SLCFMP	Southern Lee County Flood Management Plan
SWFL	Southwest Florida
TMDL	Total Maximum Daily Loads
US	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
VA	Veterans Affairs
VCB	Visitor and Convention Bureau
VOAD	Volunteer Organizations Active in Disasters

Acronym	Definition
VPK	Voluntary Prekindergarten
WHO	World Health Organization
YMCA	Young Men's Christian Association