RESILIENT
GREATER MIAMI & THE BEACHES
Preliminary Resilience Assessment
#resilient305
All cities face risk, and although Southeast Florida is vulnerable to rising sea levels due to its low elevation, unique geology, and the density of coastal developments—there are many opportunities for innovation with mangroves, dunes, parks spaces, and innovative building materials and designs.

Water attracted many of us here—as we adapt to more water, how can we thrive socially, environmentally, and economically? How can we leverage and protect the Everglades and Biscayne Bay? This discovery area will focus on investing in natural and man-made infrastructure to rise above and learn to live with water to create a more resilient community in the face of storms and sea level rise.
We are Resilient Greater Miami & the Beaches, a partnership of Miami-Dade County, and the cities of Miami and Miami Beach. We are the only city of the 100 Resilient Cities Network—pioneered by the Rockefeller Foundation—where multiple governments are collaborating to develop a collective voice that will, together, better allow us to plan, prepare, and respond to our community’s challenges. As part of this effort, we reached out to each of the 35 individual governments in the Greater Miami region to listen, learn, and incorporate input directly from community leaders, residents, and subject-matter experts.

Like many metropolitan areas, we recognize our transportation, housing, and socioeconomic challenges; however, we are also aware of the concerns associated with climate change, sea level rise, and other long-term issues. As Resilient Greater Miami & the Beaches, we are working to reduce and mitigate many of these difficulties because Miami, as we know it today, is our home as much as it is yours. As we continue this process, we continue to engage; we continue to invest. We thank our mayors, commissioners, and city managers whose leadership and support make this happen.

We are here to stay. We hope you are, too.

James F. Murley
Miami-Dade County

Jane Gilbert
City of Miami

Susanne M. Torriente
City of Miami Beach
This Preliminary Resilient Assessment (PRA) has been created by Greater Miami & the Beaches (GM&B) as part of 100 Resilient Cities (100RC) resilience planning process. It is the culmination of our first phase of listening to and learning from all of you—residents, businesses, and community organizations. It is the foundation for our next step and outlines our most important resilience priorities.

We hope you find this to be a great resource about resilience issues in Greater Miami & the Beaches. We invite you to continue on this journey with us over the next few months as we develop and prioritize actions to increase our resilience.

Participate locally through: www.resilient305.com
Learn more about the global effort at: www.100resilientcities.org
Introduction
Introduction
100 Resilient Cities

A $100 million effort launched by the Rockefeller Foundation in 2013 to help cities build resilience to social, economic, and physical challenges. To respond to impacts of urbanization, globalization, and climate change.

The Resilient Cities Network is comprised of 100 cities spanning 40 countries and 27 languages.
Resilient GM&B is a collaboration among Miami-Dade County, City of Miami, and City of Miami Beach, created to respond to the region’s major challenges.

In 2016, after a very competitive process of more than 400 applicants, GM&B was selected to join 100RC. With the support of 100RC, we are creating your resilience strategy!
Introduction
Greater Miami & the Beaches

Together we are... Resilient

Meet some of our team members; join our efforts.
Introduction
Greater Miami & the Beaches

Our Process

Fall 2016
We Launched

Phase I
We Listened and Learned

Summer 2017
We Discover

Phase II
We Plan

Fall 2018
GM&B Resilience Strategy

We are Here

Institutionalize and Implement
Miami-Dade County, the City of Miami, and the City of Miami Beach are working together in a partnership of equals to address their common and overlapping resilience challenges and opportunities.
Miami-Dade County has a strong mayor form of government. The mayor serves as the chief executive and the Commission is the legislative body.

The City of Miami has an executive mayor who appoints a city manager as the chief administrative officer. The Commission is the legislative body.

The City of Miami Beach has a council-manager system, where the mayor and six commissioners set city policy and the city manager is the chief executive.
Introduction
FINANCIAL HEALTH

GM&B is strong financially. Balanced budgeting/sound fiscal policy is a priority of current executive leadership in each jurisdiction.

For all three jurisdictions, property taxes are very large sources of revenue. This reliance on property taxes means that GM&B’s revenue was hit hard by the housing market crash in 2008, but has since steadily recovered.
Each jurisdiction has a Planning Department and engages in comprehensive, functional, and special topic planning.

The comprehensive plan is the core planning process for each of the three jurisdictions and includes short- and long-term economic, social, physical, environmental, and fiscal goals.

All three entities are integrating resilience in their next comprehensive plan updates.
GM&B Today
GM&B Context

Introduction

The 100RC process includes developing the local area context. The context is a holistic scan of resilience.

The team developed an actions inventory, collected opinions on resilience, and analyzed demographic data to understand challenges and opportunities.

The following information helps to frame and inform the resilience priorities.
GM&B Context

Positive Attributes

GM&B Highlights

**LARGE DIVERSE MARKET**
- 2.7 million residents
- More than 100 countries represented
- 60+ languages spoken

**QUALITY OF LIFE**
- 800 parks
- 76° average temperature
- 50+ museums
- 4 professional sports teams
- #1 healthy lifestyle in FL
- #4 in the US (liveability.com)

**TALENT PIPELINE**
- 250,000+ college students
- 4th largest school district in the US
- 2 research universities
- 1.4 million in labor force

Source: Beacon Council; Advantage Magazine
GM&B Context

Positive Attributes

GM&B Highlights

**BUSINESS FRIENDLY**
- NO Personal Income Tax
- LOW Corporate Income Tax
- #2 BEST STATE FOR BUSINESS (Chief Executive Magazine)
- TOP 5 MOST COMPETITIVE METRO AREAS (CareerBuilder)

**GLOBAL BUSINESS HUB**
- #6 SMALL BUSINESS Activity in US (Kauffman Foundation)
- One of the MOST COMPETITIVE Cities in 2025 (CitiForCities.com)
- #2 INTERNATIONAL BANKING Center in US
- #2 FOREIGN CONSULATES and Trade Offices in US
- #1 INTERNATIONAL FREIGHT
- #1 INTERNATIONAL PASSENGERS

**INNOVATION DESTINATION**
- #1 STARTUP ACTIVITY in US (2017 Kauffman Foundation)
- #1 CONTAINER PORT in Florida (Port Miami)
- #1 MULTIBILLION DOLLAR INFRASTRUCTURE INVESTMENTS
- Source: Beacon Council; Advantage Magazine

+ CRUISE CAPITAL OF THE WORLD

Home to EMERGE AMERICAS

Source: Beacon Council; Advantage Magazine
GM&B Context

Shocks + Stresses

Top Shocks

GROWING TRAFFIC CONGESTION

SEA LEVEL RISE + COASTAL EROSION

AGING INFRASTRUCTURE

DECREASING HOUSING QUALITY & AFFORDABILITY

Top Stresses

STORMS
Hurricane Andrew, 1992
Unnamed Storm, 1993

INFRASTRUCTURE
Dolphin Expressway Overpass Collapse at NW 97 Ave
Bridge Collapse, 2005

FLOODING
King Tide Flooding, City of Miami Beach, 2011

STORMS
Hurricane Wilma, 2005
Hurricane Katrina, 2005

GLOBAL FINANCIAL CRISIS
2008

FLOODING
King Tide Flooding Miami-Dade County, 2016

STORMS
Hurricane Wilma, 2005
Hurricane Katrina, 2005

GLOBAL FINANCIAL CRISIS
2008

FLOODING
King Tide Flooding Miami-Dade County, 2016
GM&B Context

Shocks + Stresses

• Sea level has risen about three inches since Hurricane Andrew hit and is expected to rise another three to seven inches by 2030.
• Much of the development in GM&B is close to sea level. More than 85,000 people and 53,000 homes are located on land less than three feet above high tide. More than $21 billion in assets are at risk.
• Man-made and natural systems, such as beaches and mangroves, will be affected as sea level continues to rise, likely resulting in increased damage from floods and storms.

“As sea levels rise, the risks of flooding increase. Higher sea level results in higher high tides, storm surges, and inland flooding due to higher groundwater levels.” — Young professional
GM&B Context

Shocks + Stresses

• King tides are becoming **higher** according to tidal gauges.
• While stronger **building codes** have helped protect newer buildings from storm surges, risks are more costly today due to higher water levels and increased development in vulnerable areas.
• GM&B has an **intricate water management system** overseen by local government and the South Florida Water Management District (SFWMD).
• Heavy **rain events** or high water levels can strain stormwater systems and lead to flooding.
Restoration of the Everglades and Biscayne Bay is key to providing fresh water, providing natural buffers from flooding, and protecting critical ecosystems.

Natural systems worldwide are strained by climate change and urbanization.

Two thirds of Miami-Dade County land area are protected lands, e.g., National Parks, Marine Sanctuaries, and Water Management Areas. This has resulted in concentrated development.

Limited open space in urban environment can exacerbate flooding risks and limit adaptation options.

Protections provided by offshore reefs and other marine systems are degrading due to ocean acidification and warming.
• Rising sea levels and groundwater levels require a delicate balance between retaining and infiltrating freshwater to recharge aquifers and draining freshwater to manage flooding risks, all while trying to improve water quality.
• Water, sewer, and drainage systems need to be redesigned, rebuilt, and maintained, with acknowledgement of accelerating sea level rise and the potential for higher storm surges and heavy rainfall events.
• Seasonal agriculture will continue to require careful water management, especially given saltwater intrusion into underground aquifers.

“Trying to identify inexpensive temporary solutions while seeking funding for permanent solutions.” —Inland mayor

“..using infrastructure to build community cohesion…” —Coastal mayor
Housing cost burdens have risen dramatically. Average rents increased 65% (from $1,505 in 2009 to $2,501 in 2015).

In 2014, over 66% of renter households, and over 50% of owner households were cost-burdened, making it the third least affordable housing market in the nation.

The local housing market is affected by external, often seasonal/absentee buyers.

Cities of Miami Beach and Miami are densely populated.

Inland communities, such as Doral and Kendall, are experiencing increased mixed-use development.

Housing rights for tenants are lacking.

“Foreign investments have been great for the economy but have negatively impacted housing affordability.” —Inland mayor

“‘Middle-America sprawl codes are keeping housing prices up.’” —Inland mayor
GM&B Context

Shocks + Stresses

- **Homelessness has increased 2%** since 2015 and 9.5% since the beginning of 2017.
- The Miami-Fort Lauderdale-West Palm Beach metros have one of the **highest foreclosure rates** in the nation.
- Approximately **29,000 new luxury residential** units have been built since 2010.
- Miami-Dade County and Cities of Miami, Hialeah, North Miami, Miami Beach, and Homestead receive **funding from HUD** for affordable housing which is expected to be cut significantly.

“Many waitlisted for housing assistance.” —Inland mayor

“There is much fraud and many assessments associated with high-rise developments.” —Coastal mayor

“There is no housing for young people.” —Inland mayor
GM&B Context

Shocks + Stresses

- GM&B is the sixth most congested county in the U.S.
- Connected, reliable transportation is needed between residential areas and jobs.
- Perceptions about transit need to change for more widespread ridership; “transit is for the disenfranchised.”
- Rideshare is disrupting existing travel services/patterns.
- Public transit concerns include safety, cleanliness, and reliability.

“\textit{A better quality of life is tied to more efficient transportation... Young generations want it... People don’t want to rely on private automobiles.}”

—Coastal mayor
GM&B Context
Shocks + Stresses

• Pedestrians and bicyclists feel unsafe competing with vehicles.
• Transit ridership is declining in many areas.
• Transportation is planned and managed by multiple organizations.
• Funding is needed for operations and maintenance of transportation infrastructure.

“.. 700,000 cars go through Coral Gables daily...”
—Inland mayor

“Can’t get people to flex on parking requirements”
—Inland mayor
<table>
<thead>
<tr>
<th></th>
<th>Commuters Coming In</th>
<th>Commuters Staying Within</th>
<th>Commuters Going Out</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Miami-Dade County</strong></td>
<td>248,782</td>
<td>743,205</td>
<td>201,163</td>
</tr>
<tr>
<td><strong>City of Miami</strong></td>
<td>219,626</td>
<td>46,798</td>
<td>94,025</td>
</tr>
<tr>
<td><strong>City of Miami Beach</strong></td>
<td>39,893</td>
<td>9,212</td>
<td>25,530</td>
</tr>
</tbody>
</table>
GM&B Context

Shocks + Stresses

- Though unemployment dropped from over 12% to under 5% from 2009 to 2015, 55-61% of Miami-Dade County earn less than a living income or struggle to pay for basic needs due to the preponderance of lower wage jobs and high cost of living.
- 51% of households have insufficient liquid savings to survive for 3 months at poverty level in the event of unexpected job or income loss.
- The top three economic engines, Miami International Airport, PortMiami, and Tourism, are based on transient services and transient population.
- The agriculture industry is a large component of the local economy.
- GM&B lacks a diversified economy.
- Job placement can be difficult for many residents battling barriers such as low education rates and skillsets needed for a changing economy.

Economy

“We need to foster a more diverse economy in less vulnerable areas.”
—Inland mayor

“Agriculture is at the mercy of national policies.”
—Inland mayor
There is **opportunity for more collaboration** amongst social service organizations for streamlining and improved services.

The **homeless population** is no longer just “people on the street”; it also includes recent graduates and an aging population. **15% of the homeless population** is undocumented.

Five out of ten people make too much to qualify for assistance, but not enough to live.

Access to quality and affordable childcare is difficult.

The Department of Health is concerned about the undocumented population not accessing health services.

The **aging population** struggles to afford their homes, putting stress on extended family.

Federal, state, and local **funding is uncertain, fragmented and limited.**
Florida schools are **significantly under funded** as compared to other states. The state ranks 48\textsuperscript{th} for funding in the country.

Miami-Dade County Public Schools (M-DCPS) **graduation rates are increasing**, however has a challenge of **16% not graduating** from high school on time.

It’s a challenge to **attract and retain quality educators** due to high **costs of living**.

M-DCPS has the highest **student refugee population** in the country and offer **bilingual education**.

One in five children attend **private schools** in GM&B.

As of 2017, there are **no “F” rated schools** in M-DCPS.

There are **increasingly fewer vocational programs** in public schools.

M-DCPS is a national leader in magnet schools.

---

“**Schools are overcrowded in NE Miami-Dade.”**

—Inland mayor

“**Education is a major determinant for relocation of young families.”**

—Young professional
Three primary universities are FIU, University of Miami (UM), and Miami-Dade College (MDC).

The combined enrollment of these universities and other local universities are approximately 240,000 students each term.

There is strong collaboration amongst the universities to move resilience forward with GM&B.

One Community One Goal’s Academic Leaders Council aligns with the business community to align worker availability.

Florida Climate Institute is a multidisciplinary network of 10 universities that collaborates to find a better understanding of climate variability and change.

“Local universities lack investment in the community.”
—Focus group participant

“Recent graduates are finding job placement elsewhere, where they can afford to live.”
—Current student
Although violent crime has decreased, property crime is increasing. There has been an 80% reduction in overall juvenile crime over the last 20 years. There is an increase in firearms in juvenile age group. There is a lack of accessible and affordable services to address long term impacts of mental health, substance abuse, and family support services. Overall crime is decreasing; however, isolated pockets remain in which the majority of juvenile offenders reside.

“Gangs are not based on race or culture, instead on a block-by-block basis.”
—Safety professional
• GM&B has the highest Affordable Care Act enrollment in the U.S.
• 26% of Miami-Dade County residents are uninsured.
• Miami is ranked #2 for the most HIV infections and #1 for the most HIV-related deaths in the U.S.
• In 2015, 21.6% persons under 65 are without health care insurance; 42% in 2011.
• Refugee Health Assessment Program used to average 300 people per day; the number is declining since end of the wet foot/dry foot policy.

“People don’t understand the risk of not having regular health screenings.” —Health professional

“Many people are more risk tolerant because of the issues they’ve faced in their origin countries.” —City professional
GM&B Context
Shocks + Stresses

- State declared a Public Health Emergency for the opioid epidemic: 236 people fatally overdosed in MDC from heroin/fentanyl in their blood from 2015 to November 2016.
- Pool drowning is the number one cause of death for children under five.
- The 2016 Zika Virus outbreak had 350 travel-related cases, 272 locally-acquired cases, and 44 unknown sources.

“We are given money to fight, but not to prepare.”
—Health professional

“The Zika virus cost us millions.”
—City professional
GM&B Context

Shocks + Stresses

• **GM&B is vulnerable** to hurricanes and tropical storms.
• National Climate Assessment (2014) predicts **increased intensity and frequency of hurricanes** in the region.
• Increased development and population over the last 11 years without a major storm creates **uncertainties of evacuation, response, and long-term community recovery**.
• Power and **utility redundancy** is critical and unknown.
• **Communication and access** to residents are key.
• Residents and governments **lack funding preparedness**.
• **Storm and flood insurance** rates are increasing.
• Absentee owners contribute to delayed recovery.

“**Communicating preparedness with residents is a challenge.**”
—Coastal mayor

“**Need unity throughout the county to address flood insurance.**”
—Coastal mayor
GM&B Context

Shocks + Stresses

• 35 local governments comprise GM&B.
• Intergovernmental collaboration is not fully leveraged.
• Harmonization and alignment of codes and standards is needed to address real property concerns such as land use, zoning, and sea level rise.
• Organizations need to improve their knowledge of comprehensive data, plans, and resources.
• Access and use of sea level rise-related data is new and emerging for many local governments and businesses.
• Improved relationships in and between governments would allow for stronger initiatives.

Collaboration

“Need centralized tools and structure to support small municipalities.”
—Inland mayor

“We need to cooperate as opposed to compete; we should take a holistic approach to problem solving.”
—Coastal mayor
This City Resilience Framework is a 100RC Tool to categorize plans, programs, projects, studies, and initiatives. A total of 280 were identified throughout the engagement process. Of those, 100 were prioritized for consideration in future Resilient GM&B efforts, many of which are identified on the following pages.
GM&B Context

Key Actions

- Adopted a Green Sustainable Buildings Ordinance for new construction.
- GM&B partners participate in the National Flood Insurance Program Community Rating System (CRS) Program, which recognizes floodplain management activities and have the following scores:
  - Unincorporated Miami-Dade County: 5
  - City of Miami: 7
  - City of Miami Beach: 6

“South Florida and Greater Miami & the Beaches have formed unique and progressive partnerships to plan and prepare for sea level rise and climate change.”
—Coastal Assistant City Manager
GM&B partners participate in the Southeast Florida Regional Climate Change Compact.

The Compact successfully convened scientists to develop unified sea level rise projections for Southeast Florida.
GM&B Context

Key Actions

Miami-Dade County Key Actions

• Currently performing a **vulnerability assessment of key infrastructure and capital investments**.

• The Miami-Dade County Water and Sewer Department is investing billions on **improving critical infrastructure**, and sea level rise is a key part of the design criteria.

• Miami-Dade County is developing additional **adaptation strategies** to address sea level rise.

• Miami-Dade County, in partnership with the SFWMD and the U.S. Army Corps of Engineers, works to restore, preserve, and protect the Everglades through the **Comprehensive Everglades Restoration Plan**.
Key Actions

Miami-Dade County Key Actions

- Currently partnering with the Urban Land Institute on a pilot Adaptation Action Area for the Arch Creek drainage basin.
- Currently working with Rand Corporation to visualize how sea level rise and future land use decisions will impact flooding risks.
- Working collaboratively with the South Florida Water Management District and municipalities to understand how sea level rise will impact the regional canal network.
- Investing in protecting the County’s drinking water and actively monitoring and managing any saltwater intrusion into the aquifer.
- Created a Sea Level Rise Task Force who recommended that the County prepare an Enhanced Capital Plan to increase the resilience of the County’s infrastructure.
GM&B Context

Key Actions

BIM model for an electrical building for our South District Oxygen Production Consent Decree Project. It is a brand new building that will store transformers at the bottom and all switchgear at the top, about 16 feet high.

Schematic Design: Compressor Building & Electrical Building

Iterative process identified most viable concepts to carry forward

3D visualization made it easier to obtain WASD’s endorsement
GM&B Context

Sea Level Rise + Climate Change

Key Actions

The City of Miami Key Actions

• Establishment of a **Sea Level Rise Advisory Committee** in 2015 and an interdepartmental **Resilient Infrastructure Committee** in 2017.
  • Partnering on a **Resilient Redesign for Shorecrest**.
  • Updating the City of Miami’s **stormwater master plan** while implementing stormwater upgrades in highly vulnerable areas.
  • Creating a **rapid action plan for flood risk mitigation** of critical infrastructure.
  • Strengthening flood risk mitigation in the Future Land Use and Coastal Management elements of the City’s **Comprehensive Neighborhood plan**.
  • **Proposed Miami Forever General Obligation Bond** includes $193 million for flood risk mitigation and will be on the ballot in November.
  • The City's zoning code contains several standards aimed at **maximizing natural infiltration** of stormwater directly into the ground.
GM&B Context

Key Actions

City of Miami Beach Key Actions

- Established a **Mayor’s Blue Ribbon Panel** on Flooding and Sea Level Rise and a Commission Committee on Sustainability and Resiliency.
- Committing to investing half a billion dollars to **raise roads** and improve **stormwater drainage**.
- Updated the **land use and development code** to incorporate climate adaptation and resilience, including increased freeboard, base flood elevation, roadway, ground, and seawall heights.
- Recently completed a **vulnerability assessment for its infrastructure**.
- **Constructing green living shorelines** to complement sea walls.

“The City of Miami Beach has made a commitment to adapt to sea level rise, invest in aging infrastructure, and use the best available science to do so.”

—Coastal Assistant City Manager
Sea Level Rise + Climate Change

GM&B Context

Key Actions
GM&B Context

Key Actions

City of Miami Beach Key Actions

• **Maintaining extensive sand dunes** that minimize risk from storm surge and provide habitat.
• Developing **design guidelines for historic preservation** in the face of sea level rise and climate change.
• Developing unique and creative ways to help the community learn more, including an **Adaptation Calculator** and **dynamic Resilience Open Houses**.
• Conducting dynamic **surface/groundwater modeling**.
• Recently hosted the U.S. Conference of Mayors, and is internationally **recognized for its adaptation projects**.

“Our program delivers quality of life for residents and visitors today and provides for a sustainable and resilient tomorrow.”
—Coastal Assistant City Manager
GM&B Context

Key Actions

• The Miami-Dade County **Homeless Trust 10-year Plan** provides framework to locally end homelessness.

• The Miami-Dade County **Housing Surcharge Tax or MEEK tax** sets aside funding for affordable housing.

• Miami-Dade County Consolidated **Housing and Urban Development (HUD) Plan** outlines goals toward providing access and opportunity to attainable housing, social services, and jobs.

• Miami-Dade County is committed to working on a five-year plan to provide **affordable housing** in partnership with six entitlement cities, including the City of Miami and City of Miami Beach, by June 2018.

• Greater **Miami Chamber of Commerce Housing Taskforce** highlights opportunities for housing affordability.
GM&B Context

Key Actions

• University of Miami’s Miami Affordability Project is a tool to visualize neighborhood level housing market dynamics.

• The City of Miami Beach initiated Innovative Housing Conversion Projects.

• The City of Miami’s affordable and attainable mixed-income and workforce housing benefits ordinances.

• The City of Miami’s Miami 21 is a form-based zoning code guide based on principles of New Urbanism and Smart Growth

• Florida International University (FIU) Metropolitan Center is an urban policy think tank and solutions center.

• Liberty Square Rising revitalization initiative is for the redevelopment of the Liberty Square Public Housing Project.

• Adopted a volunteer Property Assessed Clean Energy Programs (PACE) program.
GM&B Context

Key Actions

• Transit Planning Organization (TPO) completed a 2040 Long Range Transportation Plan.

• Miami-Dade County Strategic Miami Area Rapid Transit (SMART) Corridor Plan identifies six major corridors for proposed mobility solutions.

• TPO’s Land Use Study determines how mobility networks interact with land uses.

• TPO’s Transportation Improvement Program (TIP) identifies a list of upcoming transportation projects over a four-year period.

• Miami-Dade County Metrorail Car Replacement Program is a phased implementation plan to replace Metrorail Cars.
GM&B Context

Key Actions

• Multiple, highly used Municipal Trolley + Circular Systems are operated and funded by the local governments.

• Underline Project is a planned 10-mile neighborhood park, urban trail, and living art destination underneath the existing Metrorail line.

• The City of Miami Beach Transportation Master Plan has a Pedestrian First Strategy component.

• City of Miami Beach built the city’s first protected bike lane in Miami-Dade County.
GM&B Context

Key Actions

• Miami-Dade County **Homeless Trust** oversees the **Homeless Plan** and provides funding support to provider organizations.

• City of Miami **A Comprehensive Center for Exceptional Student Services (ACCESS) Program** provides free individual tax assistance at parks and Neighborhood Enhancement Team (NET) Offices.

• **Career Centers** at Lindsey Hopkins and Camillus House.

• Summer Youth **Financial Empowerment & Employment Program**.

• City of Miami **Homeless Assistance Program (MHAP)** provides services to the homeless.
Social Services

GM&B Context

Key Actions


• Beacon Council’s One Community, One Goal Initiative provides a roadmap for economic success.

• CareerSource works directly with business to connect them with people in need of jobs.
GM&B Context

Key Actions

- **Consortium for a Healthier Miami-Dade** to act as a catalyst for healthy living.
- The Children’s Trust funded **school-based health clinics**.
- The Miami-Dade County **Healthcare Preparedness Coalition** serves as a forum of healthcare organizations and supporting agencies.
- The Miami-Dade County **substance abuse task force** combats the ongoing drug epidemic.
GM&B Context

Key Actions

• The MetroLab partnership with local universities is studying ways to help local government combat mosquito-borne illness.

• Miami-Dade County **funding operation model for mosquito control** improved to address Zika.

• **Mosquito repellent** was provided to vulnerable populations by local government organizations.

• Media and neighborhood **outreach campaigns about Zika** awareness were held.
GM&B Context

Key Actions

• GM&B partners have active social media presences to distribute information and monitor potential risks.
• Miami-Dade County’s juvenile assessment center (JAC) works to address and intervene prior to re-offense.
• Miami-Dade County is a leader in-state for civil citations of juvenile offenders to avoid jail and offer rehabilitative services.
• M-DCPS ended out-of-school suspensions, reducing juvenile crime.
• The Children’s Trust Together for Children Initiative is a coalition formed to promote and address youth safety.
• Education, mentoring, and workforce development initiatives were formed with 5000 Role Models and Big Brothers Big Sisters.
GM&B Context

Key Actions

• After Hurricane Andrew, the South Florida Building Code transformed construction standards to ensure buildings stand up to storms. It was adopted by the entire State of Florida.

• GM&B has advanced Urban Search and Rescue teams, ready to deploy in the event of a major disaster recovery.

• Local Mitigation Strategy (LMS) Workgroup meets quarterly to coordinate and move disaster preparedness and mitigation funding.
GM&B Context

Key Actions

- City of Miami’s **72-hour initiative** prepares the community for hurricanes, terrorism, and active shooter events.
- American Institute of Architects Miami **Sea Level Rise (SLR) Task Force** are identifying opportunities to strengthen the Florida Building Code.
- City of Miami Beach **land use codes have been updated to take SLR projection into account and plan for climate adaptation.**
- The countywide **Recovery Plan** addresses policies that promote an all-hazards disaster recovery process amongst all stakeholders.
GM&B Context

Key Actions

• GM&B partners are members of the Southeast Florida Regional Climate Change Compact. Municipal working groups meet about important topics.

• Seven50 is a blueprint for development in Southeast Florida and takes sea level rise into account.

• Several leadership groups meet routinely, including: the Miami-Dade County Manager’s Association, the Planners Technical Committee (PTC), and the Miami-Dade Police Chiefs Association.

• GM&B partners are translating resilience planning into budgeting and strategic planning.
GM&B Context

Key Actions

• Miami-Dade County League of Cities unites common interests of governments within the county.

• The Miami Urban Area Working Group (UAWG) establishes Urban Area policy and Urban Areas Security Initiative (UASI) funding allocation.

• Miami-Dade County LMS Workgroup meets quarterly to discuss disaster preparedness and mitigation funding.

• The Transportation Planning Organization (TPO) meets regularly to coordinate federal funding and prioritize capital projects.
GM&B Context

Case Study

Miami-Dade County is vulnerable to a variety of hazards and the Comprehensive Emergency Management Plan establishes the framework for the County and its 34 municipalities to address these risks. The Plan outlines the intergovernmental roles and responsibilities. Each municipality is independently responsible for the safety of its residents and visitors with mutual aid support from the County.

The Local Mitigation Strategy (LMS) Working Group is made up of a broad stakeholder group including federal, state, and local government; private enterprise; private and public schools, colleges, and universities; hospitals; and not-for-profits. The Working Group meets quarterly to update the strategy which includes a countywide list of funded and unfounded projects which are tracked to monitor progress on risk mitigation and comprehensively address the impact the current and future hazards.

In addition to the LMS working group, the Whole Community Engagement Group is convened quarterly by The County's Emergency Management with representatives of the municipalities, universities/colleges and other County partners. The group is convened to discuss current issues, best practices, and inform and solicit feedback on current plans.
GM&B Context
Transient + Aging Population

ANNUAL POPULATION: GM&B has 2.7 million people with 52% foreign-born; 21% under age 18 and 15% over age 65; the average age is 36 years old and is expected to increase to 40 by 2030.

POPULATION
2.7

MEDIAN AGE
36
GM&B Context
Transient & Aging Population

VISITING POPULATION:
22.5 million arrivals at Miami International Airport in 2016;
51% international and 49% domestic visitors to GM&B;
33% of visitors from Latin America annually; 85% visit for leisure.
GM&B Context
Education + Language

EDUCATION: Among residents over the age of 25, **20% have no high school degree** and **36% percent have a college degree**. Miami-Dade County Public School (M-DCPS) high school graduation rates are slightly below the national average.

LANGUAGE: **531,023 (19.6%)** of the 2.7 million people are **not proficient in English**.
GM&B Context
Income Gaps + Averages

INCOME: The average income is $43,278, 11% lower than the national average.

POVERTY: 20% of the population lives below the poverty level, 5% higher than the national average.
GM&B Context

Poverty

VULNERABLE: 21% of GM&B is in poverty; 27.5% of persons in poverty are under the age of 18. According to a 2016 Bloomberg report, the City of Miami is the most unequal in the country with a large gap in cost of living and cost of housing.
GM&B Context
Distressed Communities

VULNERABLE: The region has high levels of poverty, housing distress, and low educational attainment primarily in isolated pocket communities.

The highlighted 14 neighborhoods have been identified as Miami-Dade County’s most distressed based on 12 economic, education and housing distress indicators.

Information provided by the FIU Metropolitan Center – Prosperity Research Initiative Study, May 2016
GM&B Context
Tourism + Economy

TRANSIENT: The top three economic engines, Miami International Airport, PortMiami, and Tourism, generated approximately $85.5 billion in 2015.

Source: 2016, The Greater Miami Convention & Visitors Bureau
**GM&B Context**

**Growing Industries**

**Economy + Diversity**

---

**Hospitality**

Industry Growth:

<table>
<thead>
<tr>
<th>Year</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>120,894</td>
</tr>
<tr>
<td>2016</td>
<td>137,791</td>
</tr>
</tbody>
</table>

Industry Growth: **14%**

Wages/Salaries*:

$28,919

Total No. of Companies: **6,869**

Who's Here:
- Royal Caribbean
- Carnival Cruise Lines
- Crystal Cruises
- Joe's Stone Crabs
- Amadeus
- North America
- Expedia
- Fontainebleau Hotel, East
- Miami
- Big Bus Tours
- Faena Hotel
- Zoo Miami
- Perez Art Museum Miami

---

**Life Sciences & Healthcare**

Industry Growth:

<table>
<thead>
<tr>
<th>Year</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>118,655</td>
</tr>
<tr>
<td>2016</td>
<td>128,263</td>
</tr>
</tbody>
</table>

Industry Growth: **8%**

Wages/Salaries*:

$54,092

Total No. of Companies: **1,581**

Who's Here:
- BD Biosciences
- Beckman Coulter
- Cordis
- Novartis
- Pharmaceuticals
- Teva Pharmaceuticals
- Medtronic
- Latin America
- Novartis
- Latin America
- OPKO Health
- Baptist Health System
- UHealth
- Jackson Memorial
- Nicklaus Children's
- Mount Sinai Medical Center

---

*2015 Wages + Salaries, Sources: EMSI 2016 via Beacon Council; Advantage Magazine*
GM&B Context

Growth Industries

Economy + Diversity

**BANKING**

Industry Growth:
Year | Jobs
---|---
2012 | 36,802
2016 | 40,975

Industry Growth: 11%

Wages/Salaries*:
$105,584

Total No. of Companies: 2,964

Who’s Here:

**CREATIVE**

Industry Growth:
Year | Jobs
---|---
2012 | 23,066
2016 | 26,100

Industry Growth: 13%

Wages/Salaries*:
$70,233

Total No. of Companies: 3,448

Who’s Here:
Telemundo, Tiffany & Co., Latin America, Perry Ellis International, Rene Ruiz, Bianca Coletti, Chopard Marketing, Hermes Latin America, Univision, HBO Latin America, Del Toro, Miansai

---

*2015 Wages + Salaries, Sources: EMSI 2016 via Beacon Council; Advantage Magazine
GM&B Context
Economy + Diversity

**TRADE**

Industry Growth:
Year Jobs
2012 28,533
2016 34,394

21%

Wages/Salaries*:
$47,721

Total No. of Companies: 2,511

Who's Here:
Hellman Worldwide,
Ryder, Seaboard Marine,
Southeastern Freight Lines,
Sysco South Florida, CMA
- CGM (Caribbean), DHL
Global Forwarding, FedEx
Latin America and Caribbean,
Kuehne & Nagel, Maersk,
UPS Americas, Dependable
Packaging Solutions, Floral
Logistics, Flagler Global
Logistics, Trans-Express,
Overseas Cargo

**AVIATION**

Industry Growth:
Year Jobs
2012 21,264
2016 24,670

16%

Wages/Salaries*:
$62,253

Total No. of Companies: 482

Who's Here:
American Airlines, LATAM,
KLX Aerospace Solutions,
Boeing Flight Services, IATA,
Airbus Americas Training
Center, HEICO, AAR, Barfield,
Satair, FEAM, ATR Americas.

*2015 Wages + Salaries, Sources: EMSI 2016 via Beacon Council; Advantage Magazine
Although the Technology Industry has the lowest number of jobs in comparison to other industries, the Technology Industry is seeing the most job growth in recent years.

Industry Growth:
- Year 2012: 6,795 Jobs
- Year 2016: 8,674 Jobs
  - 28% Growth

Wages/Salaries*:
- $87,171

Total No. of Companies: 7,773

*2015 Wages + Salaries, Sources: ESI 2016 via Beacon Council; Advantage Magazine
Stakeholder Engagement
The Stakeholder Engagement part of resilience strategy development is proactive and inclusive to reflect all parts, ages, ethnicities, cultures, and income levels of a community. Our efforts range from simply informing to listening, consulting, and collaborating—with goal of empowering the whole community to have a voice in building resilience.

This section contains a summary of stakeholder assessment via meetings, focus groups, online questionnaires, social media, and summaries.
Stakeholder Engagement
Summary

2,031 Responses in 2 months
Resilient GM&B Priorities Online Questionnaire

9 Subject Specific Meetings 118 Participants
transportation, housing, planning, education and youth development, social services, health services, public safety, water resources and natural systems, GIS

14 Interactive Focus Groups 491 Participants
LMS, MDCCMA, Philanthropy Miami, Miami Beach Workshops, Code for Miami, Planner Technical Committee, AIA/MCAD, CLEO Institute (Little Haiti), UASI, GMCC Goals Conference, South Dade EDC, Liberty City, Little Havana, Doral Community Coalition

403 Responses in 2 months
Discovery Area Priorities Questionnaire

70% Mayor Meetings Completed
Numerous Local Speaking Engagements

200 Participants
Agenda Setting Workshop

5 100RC Engagements
Resilience Summit, Facebook Live, Gold Coast Australia Resilience Symposium, Manchester ASW, New Orleans
Stakeholder Engagement
Numbers as of August 2017

Stakeholder Engagement
Numbers as of August 2017

379 likes 386 followers

Facebook Live with The New Tropic: 3000 viewers

379 likes 386 followers

1,010 following 462 followers

1,151 following 390 followers

Resilient305
@Resilient305

A collaboration between @MiamiDadeCounty, @CityofMiami, @MiamiBeachNews and @100ResCities to respond to Greater Miami & The Beaches’ challenges

Miami, FL
resilient305.com
Joined March 2017
75 Photos and videos

3000 viewers

Tweets 242
Following 1,010
Followers 462
Likes 167
Lists 1
Stakeholder Engagement
Key Issue Topics

Social Services
• Awareness of services (by users and by providers)
• Collaboration (data sharing, resources, tracking)
• Cultural diversity

Natural Systems
• Quality (Everglades, Biscayne Bay)
• Integration (urban, preservation)
• Agriculture

Planning + Zoning
• Collaboration among Miami-Dade County and all cities
• Land use standards
• Data sharing
• Lack of economic diversity

Public Safety
• Juvenile crime
• Cybersecurity
• Disaster response
Stakeholder Engagement

Key Issue Topics

Housing
- Rent-regulated housing; affordability bands
- Location and quantity of availability
- Non-resident buyers driving up housing costs

Transit
- Public perception of public transit
- Transit reliability, ease of use, safety
- Multimodal options (safe, connected)

Water Resources
- Water quantity and quality (aquifer, sea level rise)
- Shoreline nourishment
- Utility infrastructure (water, sewer)

Education + Youth Development
- Funding per child
- Truancy + graduation rates

Health Services
- Health pandemic (Zika, yellow fever)
- Preventive care in amongst vulnerable populations
- Major health issues (HIV, drug use)
Stakeholder Engagement

Key Findings

“What is Resilience?”

“Adaptability in the built environment... buildings that can withstand shocks and stresses.” — Architect, Private Sector

“Be prepared, now.” — Engineer, Public Sector

“Urban Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.” — 100RC

“The ability to recover from acute or chronic stresses.”
— Emergency Management, Public Sector

“Proactive and engaging all stakeholders to create a plan that resolves issues.” — Community Programs, Non-profit
Priority Shocks + Stresses

Stakeholder Engagement
Key Findings – Averages

Shocks

Agenda Setting Workshop
- Hurricanes/Tornadoes: 22%
- Economic Crash: 11%
- Infrastructure Failure: Cyber Security/Communications: 9%
- Infrastructure Failure: Transport/Access: 9%

Focus Groups
- Hurricanes/Tornadoes: 28%
- Economic Crash: 17%
- Infrastructure Failure: Transport/Access: 9%
- Rainfall Flooding: 9%

Mayor Meetings
- Rainfall Flooding: 19%
- Economic Crash: 19%
- Hurricanes/Tornadoes: 19%
- Infrastructure Failure: Sewer/Stormwater: 16%

Top Shocks across engagement include Hurricanes/Tornados, Economic Crash, Infrastructure Failure
**Stakeholder Engagement**

**Key Findings – Averages**

**Priority Shocks + Stresses**

**Agenda Setting Workshop**
- Overtaxed + Unreliable Transportation System: 15.5%
- Rising Sea Level + Coastal Erosion: 15.5%
- Aging Infrastructure: 15.5%
- Lack of Affordable Housing: 14%
- Access to Quality Education: 7%

**Focus Groups**
- Lack of Affordable Housing: 29%
- Overtaxed + Unreliable Transportation System: 25%
- Rising Sea Level + Coastal Erosion: 17%
- Pronounced Poverty: 11%
- Aging Infrastructure: 9%

**Mayor Meetings**
- Overtaxed + Unreliable Transportation System: 23%
- Aging Infrastructure: 16%
- Rising Sea Level + Coastal Erosion: 15%
- Unstable Political Climate: 12%
- Lack of Affordable Housing: 12%

*Top Stresses across engagement include Housing, Transportation, Infrastructure, Rising Sea Level*
Stakeholder Engagement

Key Findings – Averages

**Strengths + Weaknesses**

**Agenda Setting Workshop**
- Ensures continuity of critical services **21%**
- Meets basic needs **11%**
- Fosters long-term and integrated planning **10%**

**Focus Groups**
- Provides and enhances natural and man-made features **27%**
- Meets basic needs **23%**
- Ensures continuity of critical services **17%**

**Mayor Meetings**
- Fosters long-term and integrated planning **16%**
- Promotes cohesive and engaged communities **16%**
- Ensures continuity of critical services **12%**
- Ensures social stability, security, and justice **12%**

*Top Strengths across engagement is ensures continuity of critical services*
Stakeholder Engagement

Key Findings – Averages

Strengths + Weaknesses

**Agenda Setting Workshop**
- Provides reliable communications and mobility: 31%
- Empowers a broad range of stakeholders: 12.5%
- Supports livelihoods and employment: 8%

**Focus Groups**
- Supports livelihoods and employment: 30%
- Fosters long-term and integrated planning: 21%
- Provides reliable communications and mobility: 18%

**Mayor Meetings**
- Provides reliable communications and mobility: 19%
- Meets basic needs: 13%
- Ensures continuity of critical services: 13%

*Top Weaknesses across engagement is reliable mobility*
This City Resilience Framework gauges perceptions of primary resilience drivers. Workshop, meeting, and focus group participants from government, private, and civic sectors performed a strengths and weaknesses assessment on our services to identify gaps and opportunities.
An online questionnaire was created and live for two months and received a total of 2031 responses.
An online questionnaire was created and live for two months and received a total of 2031 responses.

Which issues should be prioritized in our 20-year resilience strategy?

- **Water Management**: Provide additional flood protection against floods from rain + extreme high tides while improving health + safety (436 votes)
- **Housing**: Safe + affordable housing availability (447 votes)
- **Environment + Sustainability**: Resource management + protection of environmental + natural resources (708 votes)
- **Urban Mobility**: Reliable, well-connected + easy to access transit system (737 votes)
- **Climate Change**: Risk assessment + actions (986 votes)
Infrastructure + Environment

Protects and enhances natural and man-made assets; ensures critical services operate in times of need; and provides a free flow of people, information, and goods.

Choose two factors that you feel are most important and rate how you think we’re performing.

- Accessible + secure communication networks
- Decentralized renewable energy sources + safe energy generation + delivery
- Protective systems in place against flooding
- Continuity in operating + maintaining critical infrastructure
- Protecting natural resources
- Efficient, secure + reliable public transport

Legend:
- **Area of strength**
- **Doing well but can improve**
- **Need to do better**
Questionnaire Responses

Key Findings

**Economy + Society**

Promotes social unity and the empowerment of its residents; ensures social stability, security, and justice; and fosters economic prosperity.

Choose two factors that you feel are most important and rate how you think we’re performing.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Area of strength</th>
<th>Doing well but can improve</th>
<th>Need to do better</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local identity + culture through which residents feel a sense of belonging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities + incentives for small businesses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inclusivity + collaboration through community engagement + programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal/fair local economy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A safe + secure community with fair policing practices</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Health + Wellbeing

Addresses the basic needs of the population including housing and healthcare, and provides its people with access to jobs and opportunities.

Choose two factors that you feel are most important and rate how you think we’re performing.
Leadership + Strategy

Promotes effective and efficient management; empowers a broad range of stakeholders; promotes long-term integrated planning.

Questionnaire Responses

Key Findings

Choose two factors that you feel are most important and rate how you think we’re performing.

Leadership + Strategy

Integrated + coordinated planning between departments
Evidence-based decision making
Strong integration of communities
Policies to improve the quality of education + the retention of students
Transparency + good communication between governmental entities + communities

---

Other

---

Area of strength, Doing well but can improve, Need to do better
What do you think should be more important for adapting to sea level rise, flooding and storm surge?

- Understanding and communicating risk, options and cost: 30.00%
- Potential changes of insurance rates and property values: 15.00%
- Protecting natural resources, water quality and supply: 25.00%
- Infrastructure Investments: 30.00%

What is most important to you in terms of mobility and housing?

- Roadway congestion and parking: 35.00%
- Safe and connected public transit, walkability and bikability: 30.00%
- Easy access to work, home and leisure: 10.00%
- Reasonably priced housing and variety of housing options (e.g. size, type, design): 15.00%
Questionnaire Responses
Understanding Priorities

What would ensure you and your family's financial success and longevity in GM&B for future generations?

- Job and/or business growth
- Quality infrastructure such as natural resources, roads/bridges, drainage, utilities
- Realistic cost of living
- Quality education and/or training

What is your top health and safety priority?

- Extreme weather events
- Terrorism, violence and crime
- Access to healthcare and insurance
- Diseases and infections (e.g. Zika, HIV)
- Healthy habits and access to healthy food choices
Questionnaire Responses
Understanding Priorities

What is most important to you for quick recovery in the event of a disaster like a storm (assuming your friends and family are safe)?

- Ability to obtain funding and qualified contractors for repairs
- Ability to access work, home and childcare
- Getting power, food and water
- Accessing social or support services
- Stronger buildings
- More affordable and responsive insurance
- Reducing risk through infrastructure improvements
- Focusing development in less risky areas

What should government start to plan for now to prepare and recover from a potential disaster?
How can local government best address the priority areas previously mentioned?

- Strengthen leadership and collaboration: 15.00%
- Update how governments plan and deliver services: 25.00%
- Modernize policies and regulations: 20.00%
- Expand use of data for decision-making: 10.00%
- Improved relationships between government and residents: 30.00%
What makes you proud of our community?

- Diverse/multi-cultural/Inclusive Community
- Local Identity/Local Leadership/Government
- Tourism/Internationalism
- Urban/Infrastructure Assets
- Natural Environment Assets
- Arts/Cultural Events/Institutions
- Other

*This is a sample set, categorizing 400 of the approximately 1,100 responses.*
What makes you proud of our community?

“I'm proud of our clean beaches, new bike lanes, city bikes, programs for the community...improving schools, a government that cares for growing this city forward!” —Real estate professional

“Its growth in the arts and performing arts and creation of major world class festivals.” —Visitor

“I love the diversity of our people and our beautiful natural resources.” —Non-profit professional

“The natural environment and the cosmopolitan feel of our community.” —Tourism + entertainment professional

“Our open arms to people from other countries, especially those facing danger and socioeconomic hardship in their home countries.” —Tourism + entertainment professional
Discovery Areas
Discovery Areas

The Resilient GM&B team has engaged residents and organizations to prioritize Discovery Areas for further investigation.

The Discovery Areas outlined in the following pages are the framework for our next body of work. They will help us understand risk, recognize connections, and focus on data.

Here is what we have learned:
We are proud of our rich cultural diversity. This is one of our greatest strengths. Diversity with real dialogue and strong relationships result in great opportunities.

We are a series of neighboring communities with distinct challenges and opportunities from neighborhood to neighborhood or from one side of the highway to the other. We crisscross each other from Little Havana to Homestead.

How do we stop and connect? How do we empathize and uplift? How do we create a cohesive GM&B community of communities? A beautiful mosaic or quilt – that can stand alone, but is so much stronger together?

We propose six Discovery Areas.
The six Discovery Areas are inter-related. Our systems need to be modernized and moved away from typical silos to more collaborative, creative, and entrepreneurial solutions. We therefore propose three **Cross-Cutting Themes** across each Discovery Area.
Cross-Cutting Themes

- Too many of us are struggling just to find living-wage jobs, affordable housing, and feel safe in our neighborhoods, therefore we need to address **Social Equity** head on.
- These complex matters require a multidisciplinary approach and must incorporate **Innovation and Technology**.
- As an **Intergovernmental Collaboration** from the start, GM&B has an opportunity to seek solutions that involve multiple public and private sector partners.
SITUATION: Southeast Florida is vulnerable to sea level rise due to its low elevation, unique geology, and the density of coastal development. However, there are many opportunities for innovative adaptation with mangroves, dunes and parks, and innovative building materials and designs.

INTENT: This discovery area will focus on investing in natural and man-made infrastructure to rise above and learn to live with water to create a more resilient community in the face of storms and sea level rise.
While we are a **subtropical region**, famous for our **connections to water**, we are also a low-lying region, **vulnerable to flooding, sea level rise** and **coastal erosion**. We are leading **innovative infrastructure investment** in some areas, but **aging infrastructure** is a both a concern and an **opportunity to rebuild in better ways** that **enhance our people and environment**.
We can build upon vulnerability assessments, architectural innovation, solutions that incorporate gray and green infrastructure, the strong Florida Building Code that requires construction to withstand Category 5 hurricanes. We can point to the Southeast Florida Climate Change Compact as a testament to collaborative leadership for climate change, but social equity needs more work. Climate change, environment and water management were top priorities in our questionnaire.
Pending Questions for Phase II

- **Coordinated and Committed Planning:** How do we proactively plan, coordinate, and use consistent data and communications strategies across governments and the private sector to address sea level rise risks?

- **Funding:** How do we utilize existing budgets and leverage innovative financing and funding mechanisms to equitably implement adaptation projects and improvements to aging infrastructure?

- **Natural Systems:** How do we use emerging science to plan for and manage sea level rise impacts on coastal erosion and natural ecosystems?
SITUATION: Residents spend too much time commuting, and struggle to find reasonably priced housing that fits their needs. We are the Gateway to the Americas with the one of the largest international airports and the top cruise port in the U.S., wages are lower than the national average, and housing costs are high.

INTENT: This discovery area will focus on improving livability, affordability, and connectivity in GM&B.
We have strong, well-developed, international transportation assets with well-developed supporting networks for goods. However, for people trying to get from home to work, our public transit and roads are overtaxed and unreliable. We are densely populated, geographically large, and a high growth region, which places stresses on housing access and affordability and causes even more traffic & transportation stress. International investment makes our real estate more expensive than local communities can afford. Transportation and housing have been top concerns through stakeholder engagement.
Pending Questions for Phase II

• **Equity:** How can we work with the SMART Plan consortium to integrate **social equity issues** such as ensuring adjacent neighborhoods to the corridors **include affordable housing and mixed use development**?

• **Integrate:** How do we integrate **innovative housing and job opportunities into future transportation** planning activities, **while addressing existing social equity issues**, diversifying existing housing stocks, and avoiding future risk from flooding and sea level rise?

• **Collaborate:** How do we **improve intergovernmental collaboration** among public and private entities producing affordable housing to **promote the production of mixed-income and mixed use developments**?
SITUATION: Our economy lacks diverse, highly paid and living wage jobs. Our poverty rate is above the national average. We are a city of immigrants with a constant influx of people moving here for a better life.

INTENT: The discovery area will focus on workforce development, expanding and diversifying job supply, and education.
We are an international tourism destination, but our economy is over reliant on lower paying service oriented jobs. Our economy would benefit from diversity that offers higher paying wages to help people better afford high housing costs. Educational attainment is improving however schools have difficulty attracting teachers due to high cost of housing, and education is challenging given GM&B’s complex demographics. 52% of Greater Miami and the Beaches is foreign born. Overall, our focus groups across diverse communities felt that our greatest weakness is GM&B’s ability to “support livelihoods and employment.”
Pending Questions for Phase II

Building Prosperity
An Economy for All

• **Priorities:** How do we ensure that our economic and workforce development programs are addressing the dramatic disparities that exist between our racial and ethnic groups?

• **Innovation:** How could technology, private, civic and government sector partnerships help our workforce development programs to better address the needs of our most vulnerable?

• **Opportunity:** How do we leverage the major investments in infrastructure to ensure local and inclusive access to the resulting business and job opportunities?
SITUATION: Significant pockets of our community suffer from violence, crime, addiction, and poor health. Climate change and globalization have intensified public health concerns to South Florida such as Zika.

INTENT: This discovery area will examine these issues of safety, youth violence, pandemics, and public health.
Our geographic location, climate, and position as an international port city, makes us highly vulnerable to international crime, drug activity, and vector-borne illnesses like Zika. Our poverty rate is higher than the national average, and is made worse by the chronic lack of affordable housing. We also face high rates of endemic crime especially in communities with high rates of poverty and associated socioeconomic indicators.
We have the highest Affordable Care Act enrollment in the country and a significantly poor and undocumented population that do not or cannot access preventative care and social services. A thriving community depends heavily on building economic prosperity for all and adapting and advancing the way we live – to provide needed housing, transportation, health access and living wage improvements, especially in our poor and vulnerable neighborhoods, where historic distrust towards government and leadership is often deeply entrenched.
Pending Questions for Phase II

• **Advance:** How do we elevate, accelerate, and integrate the work products of our university and other partners to better prepare our systems to prevent, respond to, and recover from changes in public health due to climate change, globalization, and urbanization?

• **Equity:** How can we prioritize neighborhood enhancements, engagement and access to opportunity in neighborhoods experiencing high incidences of violent crime and poverty?

• **Intervention:** What sort of cross sector, data-driven and/or technology-based interventions could be effective to respond to the root causes of the opioid and HIV epidemics?
Robust Recovery
PREPlanning for POSTDisaster

SITUATION: We are vulnerable to hurricanes and flooding but well-known throughout the nation for our advanced emergency management.

INTENT: This discovery area focuses on how to change our culture and policies, systems, and insurance structures now for faster, more affordable, and smarter recovery in the event of a disaster.
South Florida is vulnerable to hurricanes and flooding but these risks have strengthened our emergency management, preparation and response systems. We have learned that building upon this strong foundation will accelerate robust recovery. In order to help neighborhoods recover quickly and equitably, we need to strengthen private and public sector commitments, focusing our attention on collaboration and innovation to protect our greatest assets: our people and our places. Financially, we must design our recovery contracts, finances, and insurance to reduce the financial and human impacts of shocks and stresses. As we envision risk reduction in the future, we must consider new land use approaches. Greater Miami and the Beaches desire to bounce forward, not just bounce back.
Pending Questions for Phase II

Robust Recovery
PREPlanning for POSTDisaster

• **Structure and Systems**: What plans and policies can we put in place now for post-disaster rebuilding to protect our tax base and allow for fast and smart response and recovery? What systems and services do we need and how are these systems interdependent?

• **Culture & Social Equity**: How do we create a culture of pre-disaster readiness and planning among individuals, businesses, and governments? How do we create customized tools targeted to diverse audiences with distinct needs?

• **Disaster Finance & Innovation**: What kind of financing mechanisms do organizations and residents need to rebound quickly? How can we improve insurance affordability to ensure that adaptive measures are reflected in reduced risk, and to optimize recovery through insurance and financing for governments, residents, and businesses?

“Our goal is to bounce forward, not just bounce back.”
—Coastal Assistant City Manager
SITUATION: We have 2.7 million people and growing, 35 mayors, approximately 1.2 million registered voters, 12 million tourists, and more than 2000 square miles.

INTENT: This discovery area will focus on how to build consensus, collaboration, and courage across organizations and communities to address shocks and stresses and turn challenging systems designed for the past upside down.
The GM&B **collaboration is comprised of three separate government entities**. GM&B also has 31 additional municipalities as well as state and federal partners to determine the best ways to address complex shocks and stresses such as: **transportation, housing, economic shocks, and poverty**. GM&B has strong partnerships to address sea level rise and disasters such as the Southeast Florida Climate Change Compact, the **Local Mitigation Strategy, and the Urban Areas Security Initiative**. However, our complex dynamic often creates a collaborative Rubik's cube.
• **Collaboration:** How do we **modernize** the way government does business, given the threats we face? How do we **create, organize, and commit** a culture of interdisciplinary and interjurisdictional **collaboration** around resilience? How do we use GM&B as the model for better city-county coordination? How do or can cities better access the county to know what projects are happening and how cities can help and participate? What legislative changes are needed to achieve more integrated practices?
• **Data & Innovation:** How we expand and innovate sophisticated use of data in government operations such as open data, performance management, chief innovation officers, and smart cities to inform the decision-making process? How do we build smart decision-making for resilience?

• **Engagement & Social Equity:** How do we expand effective public participation with all residents, businesses, and community groups?
Next Steps
We will investigate the pending questions in the six discovery areas to help identify actions for a robust Resilience Strategy.
Acknowledgements
This PRA is a milestone that could not have been completed without the diversity and passion of our community. Thank you to our partners in this journey—and we look forward to your roles evolving from shaping the Discovery Areas to be part of the resilience strategy implementation.
Thank you!
Toward a More Resilient GM&B

Participation – Government

- City of Miami Beach Community Development Corporation
- City of Miami Beach Chamber of Commerce
- City of Miami Beach Emergency Management
- City of Miami Beach Office of the City Manager
- City of Miami Beach Planning Department
- City of Miami Beach Police Department
- City of Miami, Public Works
- City of Miami Beach Transportation
- City of Miami Fire Rescue
- City of Miami, Grants
- City of Miami Planning Department
- City of Miami Police Department
- City of Miami Transportation
- Miami-Dade County Citizens Independent Transportation Trust
- Miami-Dade County Community Action & Human Services
- Miami-Dade County Division of Environmental Resources
- Miami-Dade County Division of Environmental Resources, Division of Planning
- Miami-Dade County Fire Rescue (MDCFR)
- Miami-Dade County Homeless Trust
- Miami-Dade County Juvenile Service Department
- Miami-Dade County Medical Examiner
- Miami-Dade County Neat Streets
- Miami-Dade County Office of Community Advocacy
- Miami-Dade County Office of Emergency Management, LMS Workgroup
- Miami-Dade County Office of Resilience

- Miami-Dade County Office of Management and Budget
- Miami-Dade County Public Housing and Community Development
- Miami-Dade County Public Schools (M-DCPS) Community Engagement
- Miami-Dade County Public Schools (M-DCPS) Regional Office
- Miami-Dade County Seaport
- Miami-Dade County Transportation Planning Organization
- Miami-Dade Expressway Authority (MDX)
- South Florida Water Management District (SFWMD)
- South Florida Regional Transportation Authority (SFRTA), Tri-Rail
- Florida Department of Public Health
Participation – Government

Thank you to each of our governments within Miami-Dade County that met with us to share their thoughts, concerns and hopes for the future of a Resilient GM&B!

- Bal Harbour Village
- City of Aventura
- City of Coral Gables
- City of Hialeah
- City of Miami
- City of Miami Beach
- City of North Miami
- City of North Miami Beach
- City of South Miami
- City of Sunny Isles
- El Portal Village
- Florida City
- Indian Creek Village
- Miami-Dade County
- Miami Shores Village
- North Bay Village
- Town of Bay Harbour Islands
- Town of Golden Beach
- Town of Miami Lakes
- Town of Surfside
- Village of Biscayne Park
- Village of Key Biscayne
- Village of Pinecrest
Thank you!

Participation – Civil + Private

- American Institute of Architects (AIA) Miami Chapter
- Bank United
- Beacon Council
- CareerSource
- Catalyst Miami
- CLEO Institute
- ESRI
- FernLeaf
- FIU Metropolitan Center
- FIU Sea-Level Solutions Center
- Greater Miami Chamber of Commerce (GMCC)
- Greater Miami Convention & Visitors Bureau (GMCVB)
- Jewish Community Services of South Florida
- Miami-Dade County City and County Management Association (MDCCMA)
- Miami-Dade Hospital Coalition
- Michael Berman Consulting
- Miami Center for Architecture and Design (MCAD)
- Miami Homes for All
- Miami Waterkeeper
- Nicklaus Children’s Hospital
- People Acting for Community Together (PACT)
- PhilanthropyMiami
- Service Employees International Union (SEIU) Florida
- South Florida Centers for Disease Control and Prevention

And of course, thank you all of the amazing residents throughout GM&B who have participated by attending our meetings, responding to our questionnaires, following us on social media, and checking out our website!

- The Children’s Trust
- The Miami Foundation
- United Way of Miami-Dade County
- University of Miami Office of Civic and Community Engagement
Thank you!
Toward a More Resilient GM&B

Steering Committee

• Gretchen Beesing, Catalyst Miami
• Truly Burton, Builders Association South Florida
• Jaret Davis, Beacon Council
• Erik Eikenberg, Everglades Foundation
• Maurice Ferre, MDX
• Valencia Gunder, New Florida Majority
• Bobbi Ibarra, Homes for All
• Marsha Jackman, Vailon Group
• Jorge Luis Lopez, Parks Foundation
• Michelle Mejia, Baptist Health Kendall
• Rebekah Monson, The New Tropic
• Delaney Reynolds, Sink or Swim
• Scott Robins, Developer

• Zerry Ihekwaba, City of Miami
• Jimmy Morales, City of Miami Beach
• Jack Osterholt, Miami-Dade County
• Javier Soto, The Miami Foundation
Thank you!

Toward a More Resilient GM&B

**Special Thanks**

- **Deputy Chief Resilience Officers:** Nichole Hefty, Amy Knowles, Stephanie Tashiro
- **100RC Team:** Otis Rolley, Eric Wilson, Peter Jenkins
- **Strategy Partner:** Claire Bonham-Carter and Lauren Swan
- **Miami Beach Intern:** Corin Smith
- **Graphics + Data:** The Greater Miami Convention & Visitors Bureau (GMCVB) for tourism data; Miami-Dade County GreenPrint for demographic data; Beacon Council: Advantage Miami for economic data; FIU Metropolitan Center for distressed community data
- **Accommodation + Support:** A special thanks to PortMiami, the Cruise Capital of the World for hosting us throughout the strategy development process!
Leadership for Tomorrow; Robust Recovery; Thriving Community; Building Prosperity; Advance + Adapt; Innovative Infrastructure
Social Equity; Innovation + Technology; Intergovernmental Collaboration
RESILIENT
GREATER MIAMI
& THE BEACHES
@resilient305