MIAMIBEACH

2022

Comprehensive Emergency Management Plan (CEMP)

May 9, 2022

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RECORD OF CHANGES

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1	5/24/22	5-Year Update; Document was reformatted, reorganized, and all sections were updated	Tim Kitchen	various sections

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STATEMENT OF CONSISTENCY

Florida Administrative Code, effective 2/11/2001

Rule 9G-6.0095 Division of Emergency Management authorizes and encourages each locally constituted municipality to establish an Emergency Management Program. Municipal Comprehensive Emergency Management Plans (CEMPs) are the municipal counterparts of the State CEMP and must be consistent with and subject to the applicable County CEMP. The City of Miami Beach has adopted the Miami–Dade County CEMP by reference. The Miami–Dade County CEMP provides the general emergency management structure and guidance under which the City of Miami Beach CEMP was formulated. The City CEMP, while intended to be consistent with and coordinated with the County CEMP, is strategic to the particular needs of the citizens of Miami Beach and the organization of its government.

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EXECUTIVE SUMMARY

The City of Miami Beach is vulnerable to a variety of hazards that could potentially threaten the City's residents, visitors, businesses, and environment. The City of Miami Beach Comprehensive Emergency Management Plan (CEMP) establishes the framework that the City of Miami Beach utilizes to be adequately prepared to deal with all hazards. The CEMP outlines the general roles and responsibilities of City departments, local, state and federal organizations as well as other stakeholders when preparing for, responding to, and recovering from a large-scale emergency or disaster. The CEMP also includes the coordination of emergency and disaster activities with volunteer organizations and business that serve the City of Miami Beach.

The CEMP addresses the five phases of emergency management (prevention/protection, preparedness, mitigation, response, recovery) set forth in the State of Florida CEMP, the Miami-Dade County CEMP, and the National Response Framework (NRF). The CEMP also describes how national, State, County and other resources will be coordinated under the National Incident Management System (NIMS) to supplement City resources in response to a disaster.

The City of Miami Beach CEMP is based on the principle of local governments bearing the initial responsibility for response to an emergency. Corollary to this principle, each level of government will accomplish the functions for which it is responsible, requesting assistance from the next higher level of government, only after resources at lower levels are clearly inadequate to cope with the situation. It follows, therefore, that local government authorities should know where and how to obtain assistance, if needed.

The CEMP is strategically oriented and addresses the operational objectives and responsibilities of coordinated City emergency response, relief, and recovery. The CEMP describes the basic strategies, assumptions and mechanisms through which the city government and agencies will mobilize resources and conduct activities to guide and support efforts through preparedness, mitigation, response and recovery. This is done in concert with Miami-Dade County's CEMP, the State of Florida's CEMP and the Federal Government's NRF in order to establish a level of operational continuity.

This Plan coordinates intergovernmental activities utilizing a functional approach that groups emergency response organizations according to roles and responsibilities. These groups are called Emergency Support Functions (ESFs). Each ESF is headed by a lead agency (or co-lead agencies), which has been selected based on its authorities, resources, and capabilities in functional areas. These functional groupings among City of Miami Beach government and other entities will serve as the primary mechanism through which the City will respond to a major or catastrophic emergency.

Throughout the CEMP, the Federal Emergency Management Agency (FEMA) Comprehensive Preparedness Guide (CPG) 101 fundamentals and the Whole Community approach strategy are utilized. While CPG 101 provides emergency

management professionals with guidance on plan development, the Whole Community approach refers to the collaboration between emergency management and a wide range of stakeholders to ensure that all are part of the planning process. These stakeholders include residents, vulnerable populations, organizational and community leaders, faith-based and non-profit organizations, the private sector, and government officials.

This Plan is based on certain assumptions and the existence of specific resources and capabilities which may be subject to frequent change. Actual measures taken by the City of Miami Beach to respond to a situation will be tailored to the specific emergency situation. As such, a great deal of flexibility is built into the implementation of this plan. Some deviation in the implementation of the operational concepts identified in this plan may be necessary to protect the public.

The Plan is comprised of the following:

CEMP Basic Plan: This plan outlines the different hazards Miami Beach is at risk for or vulnerable to. It addresses the concepts of operations for evacuation; sheltering, responsibilities for post disaster response and recovery activities of the City and other agencies; deployment of resources; financial management policies that will be adhered to in an emergency, as well as communications and warning systems. The Basic Plan also contains a section that addresses immediate short-term recovery issues to ensure a rapid and orderly implementation of rehabilitation and restoration programs for persons and property affected by a disaster. The Plan identifies annual exercises to determine the ability of the City to respond to emergencies.

Annex I – Emergency Support Function: This section organizes City of Miami Beach Departments and agencies into 18 ESFs. The ESF structure is patterned after the system outlined in the Miami-Dade County and State of Florida Comprehensive Emergency Management Plans, and the National Response Framework. Each of the 18 ESFs in this section outlines the purpose and scope of each function, the operating policies, planning assumptions, concept of operations, and responsibilities of lead and supporting agencies involved in each. The 18 ESFs and the lead departments and agencies are listed below:

Annex II – Hazard Specific Annexes: This volume contains hazard specific plans that are comprehensive in scope. They address hazards in the City of Miami Beach which require an enhanced or modified approach to dealing with that particular hazard.

Annex III – Supplemental Plans: This volume includes plans which support incident response with specific strategic objectives. These plans outline the concept of operations and, in some cases, comprehensive planning for large-scale activities that arises from a major incident or take place to supplement response and recovery.

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1 INTRODUCTION

The CEMP describes how the City of Miami Beach will mitigate, prepare for, respond to, and recover from the impact of all hazards to public health and safety, including natural disasters, technological accidents, homeland security threats, and other emergency situations. It provides an overview of operational concepts, identifies components of the City's Emergency Management Organization within NIMS and describes the overall responsibilities of local departments and agencies for protecting life and property and assuring the overall well-being and enhancing the resilience of the community.

The magnitude of an incident or disaster governs the approach used in managing an event. The Emergency Support Function (ESF) system, adopted within this plan, is very effective when handling both small and large scale incidents requiring response and recovery support from local, state and federal governments. This comprehensive plan includes provisions for flexibility of methods, operations, and actions needed to facilitate the efforts of the City of Miami Beach in accomplishing emergency management objectives no matter the scale of the incident.

Ensuring the safety of all Miami Beach's residents, businesses and visitors is a shared responsibility and effort between first responder agencies, Miami Beach Division of Emergency Management (DEM) and the City government; along with mutual aid support from the County. In the event of a citywide emergency declaration, all the City's resources are used for the mutual benefit of all residents and visitors. In a countywide emergency declaration, the resources of the County and each of its municipalities work together for the mutual benefit of all residents and visitors of Miami-Dade County. The statutory authority for this arrangement may be found in Chapter 8B of the Miami-Dade County Code. State support is governed under Florida Statute, Chapter 252. In turn, the federal government is responsible for support to both the state and local government in accordance with the Robert T. Stafford Act and Title 44 "Emergency Management and Assistance" of the Code of Federal Regulation (CFR).

On March 30, 2011, Presidential Policy Directive 8: National Preparedness (PPD-8) was signed and released by the Office of the President of the United States. PPD-8 and its component policies intend to guide how the nation, from federal, state, and local governments to private citizens, can "strengthen the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the nation." These threats include terrorist acts, cyber-attacks, pandemics and natural disasters. PPD-8 evolves from, and supersedes, Homeland Security Presidential Directive 8. PPD-8 is intended to meet many requirements of Subtitle C of the Post-Katrina Emergency Reform Act of 2006 (P.L. 109-295, 6 U.S.C. §741- 764).

The National Preparedness Goals describe the Nation's security and resilience posture through the core capabilities utilizing the Whole of Community approach as the foundation. The National Preparedness Goals defines success as:

"A secure and resilient Nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk."

Using the core capabilities, the National Preparedness Goals are achieved by:

- Preventing, avoiding, or stopping a threatened or an actual act of terrorism.
- Protecting our citizens, residents, visitors, and assets against the greatest threats and hazards in a manner that allows our interests, aspirations, and way of life to thrive.
- Mitigating the loss of life and property by lessening the impact of future disasters.
- Responding quickly to save lives, protect property and the environment, and meet basic human needs in the aftermath of a catastrophic incident.
- Recovering through a focus on the timely restoration, strengthening, and revitalization of infrastructure, housing, and a sustainable economy, as well as the health, social, cultural, historic, and environmental fabric of communities affected by a catastrophic incident.

1.1 PURPOSE

The CEMP is intended to provide an organized system of preparedness, response, and recovery by which the City manager, the Mayor, and the City Commissioners are guided in their statutory responsibilities in the provision of direction and control during a disaster. This plan has been designed to achieve a number of goals:

- To provide an organized system of hazard vulnerability reduction to the residents and businesses of and visitors to the City of Miami Beach.
- To develop an enhanced level of awareness relative to emergency preparedness.
- To provide the most efficient response and recovery system possible through effective coordination and maximum utilization of all available resources.
- To coordinate with key Miami Beach departments, Police, Fire, Information Technology, Transportation, and Public Works for the continuance and/or recovery of identified essential functions, which are Life Safety and Critical Infrastructure, to a normal state as quickly and effectively as possible after a disaster.
- To maintain a high level of readiness through community outreach and regular DEM training and exercise.
- To reduce the public's vulnerability to recurrent hazards by the promotion of hazard mitigation strategies, particularly in the areas of critical infrastructure, land use, and building codes.

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1.2 SCOPE

The CEMP establishes official emergency management policy for all City agencies in response to, and recovery from, emergencies and disasters within the city. Each entity identified herein will utilize this CEMP as the basis for development and maintenance of subordinate plans, response policies, and implementing procedures. The existence of this CEMP does not relieve response organizations from the duty of developing their own Standard Operating Procedures (SOP).

The CEMP covers the various levels of a disaster starting with “incident” and continuing through “minor disaster” then “major disaster” and finally “catastrophic disaster”. An overview of these categories of disasters is found below.

This CEMP provides the City of Miami Beach with a uniform protocol for the establishment and maintenance of a coordinated interface with the Federal, State and County Governments, private and non-profit sectors, and faith-based organizations during emergency periods. The CEMP and all associated volumes embrace the Whole Community approach utilizing all available resources to ensure the most efficient response to incidents that impact the City of Miami Beach.

The CEMP is intended to be consistent with the Comprehensive Emergency Management Plan of Miami-Dade County, including its annexes for Emergency Support Functions (ESFs), mitigation and disaster recovery, terrorism incident response, and multiple casualty incident response. The CEMP is also intended to be consistent with and supportive of the Comprehensive Emergency Management Plan of the State of Florida, as well as with the Federal government’s National Response Plan. This consistency is necessary to facilitate coordination of response and recovery operations between the City of Miami Beach, adjacent municipalities, and higher levels of government.

The CEMP acts as an overarching emergency plan but it is complemented by companion documents that expand upon and support the direction provided in this document. These documents, which are extrapolated in Volume IV, include the Recovery Plan and its accompanying volumes; the Local Mitigation Strategy (LMS); and the Threat and Hazard Identification and Risk Assessment (THIRA).

1.3 METHODOLOGY

The CEMP was prepared through a cooperative, multi-organizational process directly involving the City’s departments with responsibilities for implementation of the plan. Plan development and revision is an interactive process involving an orientation of all agencies, evaluation of the “lessons learned” following emergency situations, discussions regarding the capabilities of the City’s agencies, and analysis of the City’s preferred operational concepts. The development process also included reviewing and commenting by all stakeholders on the draft plan prior to its finalization.

1.4 ASSUMPTIONS

For planning purposes, the following assumptions were considered:

- Initial responsibility for disaster response and recovery operations within the City of Miami Beach is the responsibility of City government officials.
- The City of Miami Beach maintains authority for emergency management operations within city limits, and commits all available resources to save lives, minimize personal injury and property damage.
- If City resources are insufficient, assistance may be sought from County sources following a City declaration of emergency.
- Miami-Dade County Emergency Management will support the City of Miami Beach in its efforts to secure appropriate declarations, when necessary.
- If Miami-Dade County resources are insufficient, assistance may be sought from State sources after Miami-Dade County has issued a Declaration of a State of Local Emergency and the county requests such assistance.
- If the situation is beyond the response or recovery capabilities of the county and the State, the Governor will request activation of the Federal Recovery Framework and that Federal resources, coordinated through the Federal Emergency Management Agency (FEMA), will be deployed to the County to provide assistance.
- Transportation infrastructure will be damaged by major or catastrophic incident and local transportation services will be disrupted.
- Public utilities will be damaged and either fully or partially inoperable.
- Damage to commercial telecommunications facilities will be widespread and the ability of first responders and governmental and non-governmental responders to communicate will be impaired.
- Homes, public buildings, and other critical facilities and equipment will be destroyed or severely damaged.
- Debris may make streets and highways impassable, making the movement of emergency resources difficult.
- Many county and municipal emergency personnel will be victims of the incident, preventing them from performing their assigned emergency duties.
- Numerous separate incidents subsequent to the initial incident will further complicate response and recovery operations.
- Many survivors may be displaced from their homes and large numbers of dead and injured could be expected.

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- Many survivors will be in life-threatening situations requiring immediate rescue and medical care.
- Hospitals, nursing homes, pharmacies and other medical facility stock will be damaged or destroyed, and those that do remain will have difficulty accommodating patient surge.
- Damage to the county's airports and seaports could have significant impact on the county's economic prosperity and on the ability to move supplies and goods in and out of the county.
- Food processing and distribution capabilities will be severely damaged or destroyed.
- Damage and/or destruction of the built environment which generate, produce, use, store or dispose of hazardous materials could result in the release of hazardous materials into the environment.
- A major or catastrophic incident will most likely create disruption of energy sources and prolonged electric power failure.
- A major or catastrophic incident will have an impact on the county's economic prosperity.

1.5 Plan Activation

When a major or catastrophic emergency has occurred or is imminent, the City Manager may issue a declaration of a Local State of Emergency. Such an action will immediately activate all portions of this plan. In the absence of a Local State of Emergency, the Emergency Manager may activate portions of this plan in accordance with the appropriate levels of mobilization to facilitate response readiness or monitoring activities.

1.6 Plan Maintenance

Plan development and maintenance is a primary functional responsibility of the City of Miami Beach Division of Emergency Management. Active and on-going participation in the emergency planning process and in Plan production and evaluation is required of all who have responsibilities in Plan execution. This process involves a team of participants from all sectors of the community, and at all levels of authorities in those sectors, in a set of interrelated and reiterative activities as described in the following:

In consultation with the EOC team, the Planning Section Chief is responsible for drafting the Basic Plan and revisions thereto, defining the Plan Purpose and Scope, providing analysis of hazards and financial and resource management issues as well as the other elements of the Basic Plan. The EOC team meets on an annual basis after the end of the Atlantic hurricane season to review the Basic Plan and supporting Annexes to determine if changes need to be made based on new planning requirements, identified gaps, or identified areas of improvement. Changes are subsequently made in order to keep the

plan current and functional. The EOC Team may also discuss needed changes to the CEMP following Citywide, Countywide, and Statewide exercises.

The final draft Basic Plan with Annexes is reviewed by the City Attorney, the City Manager, Mayor, elected officials, and department and agency directors for concurrence preliminary to presentation by the City Commission for adoption. Recognizing that the planning process is ongoing, Plan adoption may be undertaken even though some elements may be incomplete. It is important to note that this CEMP remains a living document and changes will be made to the plan as deemed necessary.

SOPs will be developed by participants as necessary to support the Plan. Some SOPs will be developed concurrently with the development of the Basic Plan and the Annexes; others will follow its formal adoption. SOPs that pertain solely to internal department or agency operations in execution of ESF responsibilities are not included in distributed copies of the Plan.

The final draft plan will be submitted to the City Attorney, City Clerk and then to the City Commission after all issues have been addressed by the Emergency Manager in the final review process. Upon adoption of this plan by the City Commission, copies are distributed for official record, for users, and for public access. Any changes to the Plan after initial distribution will be sent to all parties on the distribution list/signature sheet.

The CEMP has been formulated to provide the flexibility required to efficiently handle both large and small incidents and disasters. A CEMP distribution list is maintained and updated semi-annually by DEM.

2 SITUATION

The primary mission of emergency management in the City is to support our community's disaster preparedness, response, recovery, and mitigation needs through the coordination of information and resources. Due to the City's coastal geography and other factors there are several hazards that pose a risk to the City. The Miami-Dade County Threat and Hazard Identification and Risk Assessment (THIRA), contains a detailed risk assessment of the hazards and the risks they pose to the entire County.

The THIRA helps communities understand their risks and determine the level of capability they need in order to address those risks. The THIRA is the main hazard assessment for disaster planning and is recognized as the hazard assessment section of the CEMP. Other specific hazard vulnerability analysis include a Flood Hazard Vulnerability Analysis

This section provides a summary of the City of Miami Beach's potential hazard considerations, geographic characteristics, support facilities, land use patterns, economic profile, and demographics.

Figure 1: City of Miami Beach Demographic Summary. Source: 2011-2015 ACS 5-year estimates.



2.1.1 Geographical Characteristics

The City of Miami Beach, incorporated in 1915, is located in Southeast Florida within Miami–Dade County, on a barrier island between Biscayne Bay and the Atlantic Ocean. It is connected to the mainland by four causeways.

The area was originally a low-lying mangrove swamp, which was filled with dredged material to create the system of natural and man-made islands that make up the City today.

2.1.1.1 Climate

Miami Beach has a sub-tropical climate with high humidity and precipitation. According to the National Oceanic and Atmospheric Administration (NOAA), between 1981 and 2010 the average high temperature in the City of Miami Beach was 81 degrees and the average low temperature was 71 degrees (Table 3). Within the same time period, the average annual rainfall was 51.73 inches.

Table 1: City of Miami Beach Monthly Normal Temps and Rainfall, 1991-2020

City of Miami Beach Monthly Normal Temperatures and Rainfall, 1981-2010				
	TEMPERATURE (°F)			
MONTH	**MINIMUM**	**AVERAGE**	**MAXIMUM**	**RAINFALL (inches)**
January	61.2	67.4	73.6	2.33
February	63.3	69	74.8	2.27
March	65.2	70.9	76.5	2.47
April	69.8	74.7	79.6	3.44
May	73.6	78.2	82.7	4.94
June	76.5	81.3	86	7.76
July	78	82.9	88.8	5.98
August	78.1	83.1	88.1	7.51
September	77.2	82.1	87	8.45
October	74.4	79	83.7	6.49
November	68.6	73.8	78.9	3.29
December	64.4	70.3	76.1	2.25
Annual Average	70.8	76.05	81.2	57.18
Source: National Centers for Environmental Information, NOAA 1991-2020 Normals				

2.1.1.2 Terrain

Miami Beach is a barrier island community, located in Southeast Florida, between Biscayne Bay and the Atlantic Ocean, with over seven miles of white, sandy beaches. The City of Miami Beach has a land area of approximately 7.6 square miles, ranging in elevation from approximately 2.5 ft. (North American Vertical Datum of 1988) NAVD88 to 10 ft. NAVD 88 along the dunes of east side of the island. The City consists of a single large barrier island that was filled with material, and several small manmade islands constructed from material dredged during the construction of the Port of Miami.

2.1.1.3 Political Governance

There are 34 municipalities that govern independently from Miami-Dade County. The local governments are responsible for zoning and code enforcement, police and fire protection, and other city services required within each jurisdiction.

The City of Miami Beach has a Commission-City Manager form of government. The commission consists of a Mayor and six commissioners who serve as the policy-making body of the City. The term of office of the Mayor is three (3) two (2) year terms, with the City Commissioners serving no more than two (2) four (4) year terms. The Mayor does not have veto power over the City Commission. The City Manager ensures that policies, directives, resolutions and ordinances adopted by the City Commission are enforced and implemented. The City Manager is also charged with the daily operations of the City.

The City Manager directly oversees the majority of the operations of the City. The City Manager is the chief executive officer and head of the administrative branch of the City government, and is responsible to the City Commission for the proper administration of all affairs of the City. The functions and powers of this office are outlined in City Code Subpart A, Article IV.

City of Miami Beach Departments include the following:

- Office of the City Manager
- Office of the City Attorney
- Office of the City Clerk
- Building Department
- Code Compliance Department
- Department of Emergency Management
- Environment and Sustainability Department
- Finance Department
- Fire Department
- Fleet Management Department
- Human Resources Department
- Information Technology Department
- Office of Capital Improvement Projects
- Office of Communications
- Office of Housing and Community Services
- Office of the Inspector General
- Office of Management and Budget
- Organizational Development and Performance Initiatives
- Parking Department
- Parks and Recreation Department

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- Planning Department
- Police Department
- Procurement Department
- Property Management Department
- Public Works Department
- Tourism and Culture Department
- Economic Development Department
- Transportation Department

2.1.2 DEMOGRAPHICS

2.1.2.1 POPULATION

According to the United States Census estimates, the City of Miami Beach had a total population in 2020 of 82,890 residents, with a median age of 41.6 years (2020 census). Miami Beach had a 2020 population density of 10,863.69 persons per square mile.

Although residential population in 2020 was estimated at 82,890, the average daily population of the City of Miami Beach is estimated at 222,079. This estimate includes seasonal residents, non-resident workers, hotel guests, other tourists, beach visitors and other day trippers.

Table 2: General Population Census Summary for Miami Beach, Florida (2020)

Description	Measure
Population	
Census 2020 Total Population	82,890
Land Area in square miles	7.63
Population per square mile	10,863.69
Median Age	41.6
All Firms, 2012	19,592
Educational Attainment: Percent high school graduate or higher	89.4%
Total housing units	63,543
Median Household Income	$57,211
Foreign Born Population	55.4%
Individuals in poverty	13.7%
Race and Hispanic Origin	
White alone	68.5%

Description	Measure
Black or African American alone	4.6%
American Indian and Alaska Native alone	0%
Asian alone	2.3%
Native Hawaiian and Other Pacific Islander alone	.3%
Two or More Races	8.9%
Hispanic or Latino (of any race)	58%
White alone, Not Hispanic or Latino	34.3%
Veterans	1,900
Source: 2020 U.S. Census Bureau; 2020 Demographic Profile, 2012 Survey of Business Owners,	

2.1.2.2 Households and Families

In 2016-2020 there were 43,237 households in the City of Miami Beach, with an average household size of 2.05 people. Married-Couples made up 33.3% of the households in the City of Miami Beach. No-Spouse present, family households made up 59% of all households in the City of Miami Beach. 21.3% of all households have one or more persons under the age of 18, and 16.7% of all households have one or more people 65 years and over.

2.1.2.3 Nativity and Language

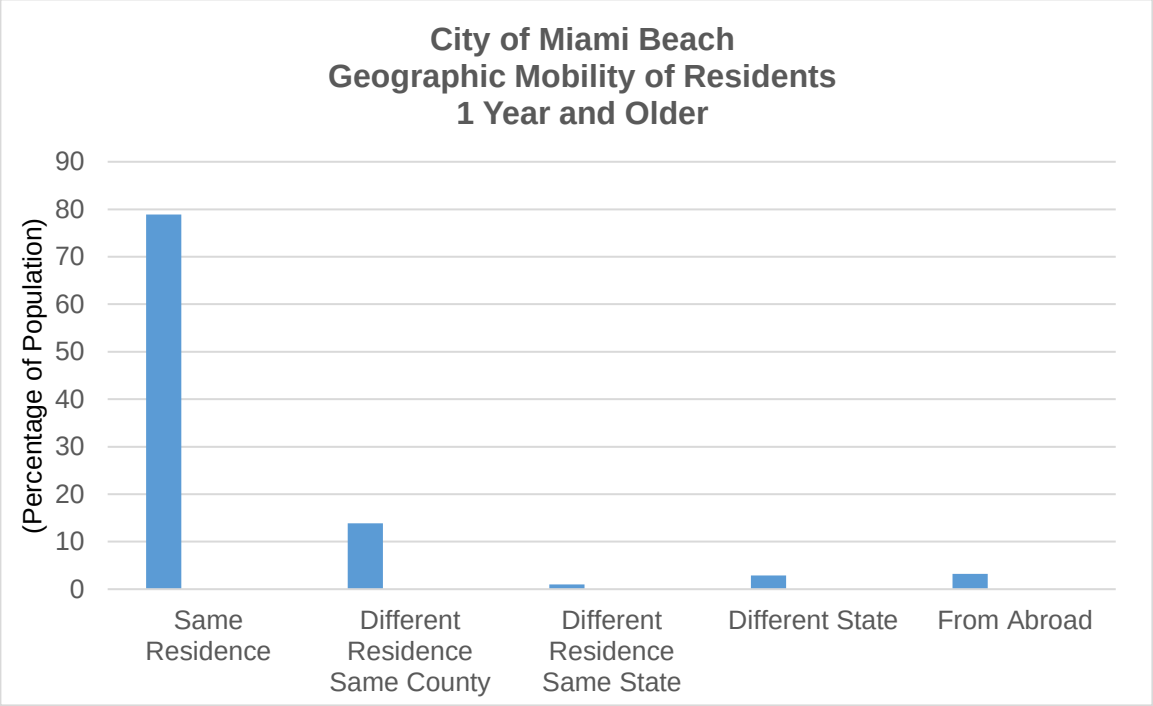
According to 2020 ACS 5-year estimates, 55.4% of persons living in the City of Miami were foreign born, 50.6% are naturalized U.S. Citizens, and 49.9% are not U.S. Citizens. 71.9% of persons age 5 years or older spoke a language other than English at home, including 58% Spanish, 10.1% Indo-European languages, 1.8% Asian Pacific Islander, and 1.9% other languages.

2.1.2.4 Geographic Mobility

The 2020 American Community Survey 5-year estimates indicate that 77.7% of the people at least one year of age living in Miami Beach were living in the same residence one year prior; 13.6% had moved during the past year from another residence in the same county, 1.7% from another county in the same state, 2.8% from another state, and 4.2% from abroad

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Figure 2: City of Miami Beach Geographic Mobility of Residents 1 Year and Older.



2.1.2.5 EDUCATION

The 2020 ACS 5-year estimates reported that 89.4% of people 25 years and over had at least graduated from high school and 47.7% had a bachelor's degree or higher.

Within the City of Miami Beach there are several schools that include the following:

- Biscayne Beach Elementary School – Student Population is 725
- Miami Beach Adult and Community Ed Center
- Miami Beach Fienberg/Fisher K-8 – Student Population is 942
- Miami Beach Nautilus Middle School – Student Population is 1,125
- Miami Beach High School – Student Population is 2,305
- Miami Beach South Pointe Elementary School – Student Population is 563
- North Beach Elementary School – Student Population is 1,048

2.1.2.6 DISABILITIES

According to the 2020 ACS 5-year estimates, 8.2% of City of Miami Beach residents reported a disability. 3.6% of persons with a disability are under the age of 65. Types of disabilities in the City of Miami Beach include: hearing difficulty (2.3%), vision difficulty (1.8%), cognitive difficulty (3.2%), ambulatory difficulty 4.6%, self-care difficulty (1.5%), independent living difficulty (3%).

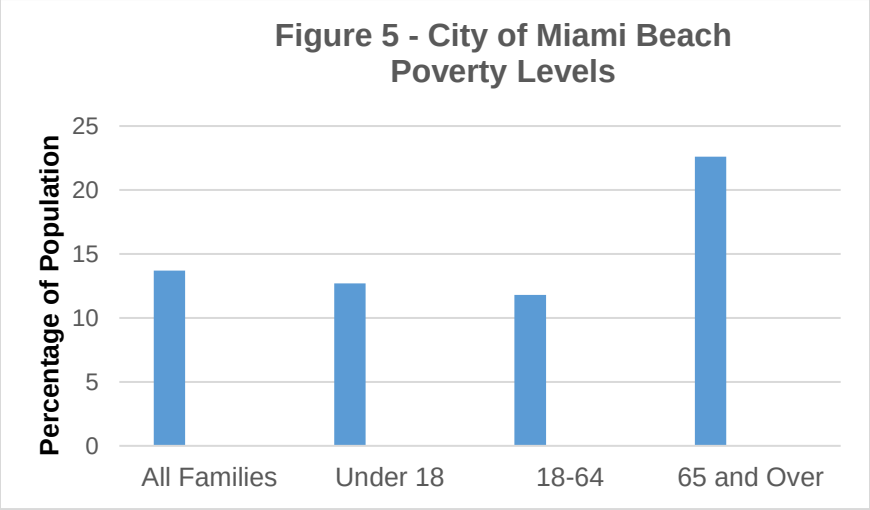
2.1.2.7 INCOME

The median household income of Miami Beach according to the 2020 ACS estimates was $57,211. Median income by types of families includes $74,893 for families, $93,441 for married-couples, and $41,711 for nonfamily households.

2.1.2.8 POVERTY AND PARTICIPATION IN GOVERNMENT PROGRAMS

2020 ACS estimates show that 13.7% of all people were living in poverty. Of those persons 12.7 percent are under 18 years of age, 11.8% were 18 to 64 years, and 22.6% were 65 years and over.

Figure 3: City of Miami Beach Poverty Levels



2.1.2.9 OCCUPATIONS AND TYPES OF EMPLOYMENT

The leading employment industries in the City of Miami Beach for the employed population 16 years and older were arts, entertainment, and recreation, and accommodation and food services (22.1%), professional, scientific, and management, and administrative and waste management services (15.8%), and educational services, and healthcare and social assistance (15.3%), according to the 2020 American Community Survey estimates.

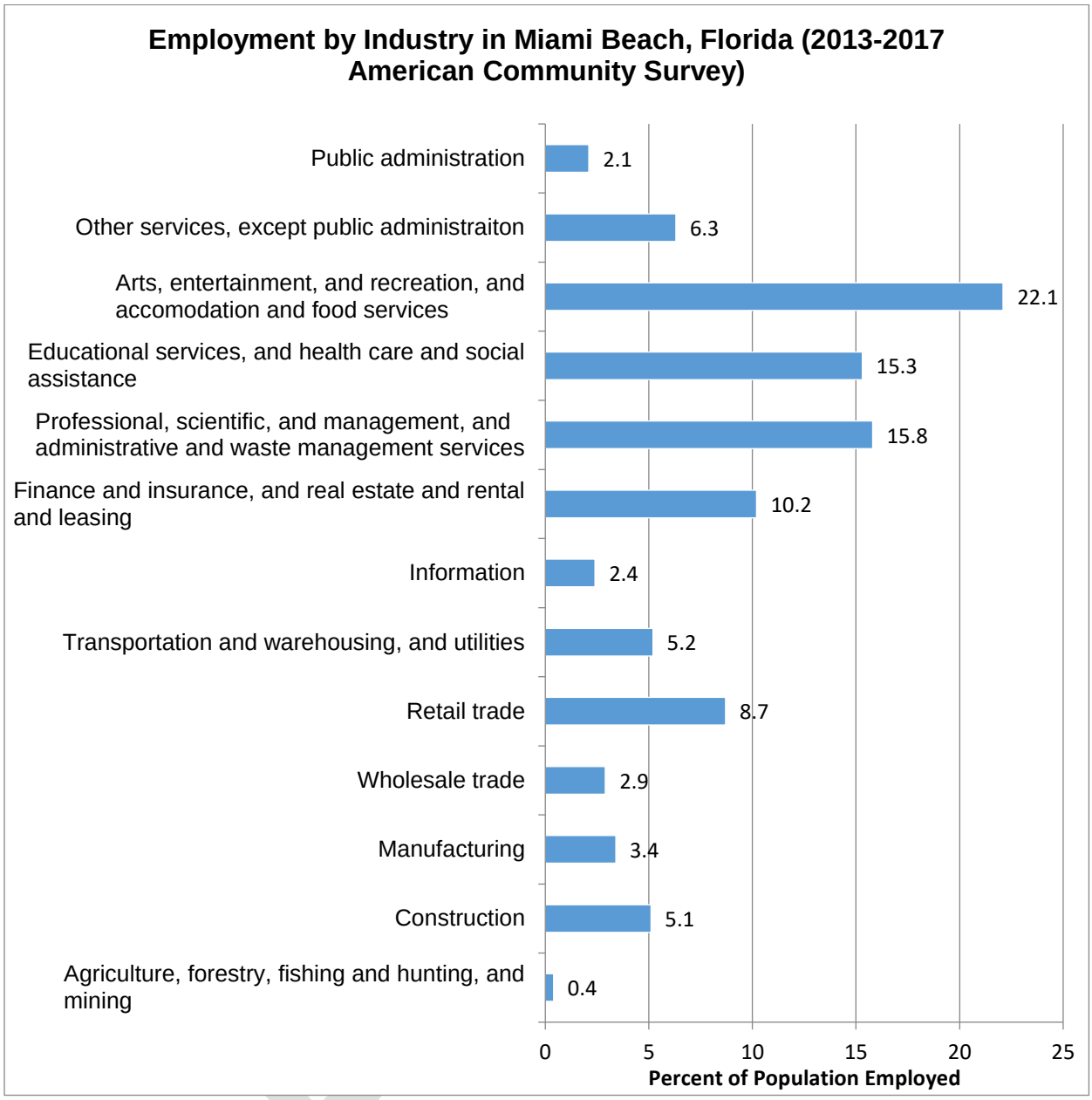
Table 3: Occupations for the Civilian Employed Population 16 Years and over in Miami Beach, Florida (2020 ACS 5-year estimates)

Civilian employed population 16 years and over	Percent
Agriculture, Forestry, Fishing, and Hunting, and Mining	.4%
Construction	5.1%
Manufacturing	3.4%
Wholesale Trade	2.9%

Civilian employed population 16 years and over	Percent
Retail Trade	8.7%
Transportation and Warehousing, and Utilities	5.2%
Information	2.4%
Finance and Insurance, and Real Estate and Rental and Leasing	10.2%
Professional, Scientific, and Management, and Administrative and Waste Management Services	15.8%
Educational Services, and Healthcare and Social Assistance	15.3%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	22.1%
Other Services, Except Public Administration	6.3%
Public Administration	2.1%

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Figure 4: Employment by Industry in Miami Beach, Florida (2020 ACS 5-year Estimates)



2.1.2.10 TRAVEL TO WORK

52.1% of Miami Beach workers aged 16 years or older drove to work alone according to the 2020 ACS 5-Year Estimates. 6.4% carpooled, 8.7% took public transportation, and 12.4% used other means (walking, working from home or other). 10.2% worked at home. Among those who commuted to work, it took an average of 27.1 minutes.

Table 4: Percentage of Workers 16 Years and over Commuting by Mode in Miami Beach, Florida (2020 ACS 5-Year Estimates)

Commute Mode	Percent
Car, truck, van -- drove alone	52.1%
Car, truck, van -- carpooled	6.4%
Public transportation (excluding taxicab)	8.7%
Walked	9.6%
Other means	12.4%
Worked at home	10.8%

2.1.2.11 HOUSING CHARACTERISTICS

According to the 2020 ACS 5-Year Estimates, the City of Miami Beach had a total of 63,543 Housing Units, 31.0% of which were vacant.

In 2013-2017, Miami Beach had 44,475 occupied housing units; 16,621 (37.4%) were owner-occupied and 27,854 (62.63%) were renter occupied. Twenty-four-point eight percent of the households did not have access to a vehicle, 49.5% had one available vehicle, 20.6% had two vehicles and another 5.0% had three or more vehicles.

One percent of the housing inventory in 2013-2017 ACS was comprised of houses built since 2010, while 11.6% of the houses were first built in 1939 or earlier. The median number of rooms in all housing units in Miami Beach was 3.3 rooms, and of these housing units 13.8% had three or more bedrooms.

Table 5: Housing Units in Miami Beach, Florida

Type of Housing Unit	Percent
Single-family houses	10.7
Apartments in multi-unit structures	89.1
Mobile homes	0.2
Boat, recreational vehicle, van, etc.	0.0

2.1.2.12 HOUSING COSTS

In 2020, the median monthly housing cost for mortgaged owners was $2,665. Non-mortgaged owners costs were $1,047 and renters' median gross rent was $1,432. Median value of an owner-occupied unit was $459,000.

2.1.3 Economic Profile

Overall, the economy of the City of Miami Beach has remained stable. The Total Gross Domestic Product for Miami-Fort Lauderdale-West Palm Beach, FL (MSA) is $365,051,489.

In recent years, the City has grown more than only its traditional tourism based economy to become a multifaceted industrial center and regional leader for the location of Information, Health Care, and Arts & Culture industries.

2.1.3.1 Major Economic Generators

2.1.3.1.1 Tourism

According to the Greater Miami Convention & Visitors Bureau 2019 Annual Report, the state of Greater Miami's tourism industry was strong in 2019. Employment in the travel and hospitality sector reaching a record 147,000 jobs, making it one of the leading employment sectors in the community. Greater Miami and the Beaches' hotel industry had a strong performance in 2019, ranking in the top 10 among the top 25 hotel markets in the U.S. according to STR, the leader in providing insights for the hotel industry. The hotel and travel industry's success is in part linked to destination marketing programs that help drive demand and increase the number of visitors to Greater Miami and the Beaches. In 2019, the GMCVB continued the successful "Found in Miami" branding campaign, driving global impressions worldwide through advertising, public relations, social media and sales initiatives supporting leisure as well as meetings and conventions business. Greater Miami attracted 16.3 million overnight visitors and an additional 7.9 million Day Trippers, for a record number of 24.2 million total visitors in 2019. Total economic impact eclipsed $17.9 billion with the vast majority, $16.3 billion, coming from overnight guests.

Consistent with previous years, Miami Beach remained the most common area for visitor lodging. Downtown Miami and the Airport Area were also top areas for lodging. The following is a percentage breakdown of where visitors who used lodging stayed in 2019:

- Miami Beach (38%)
- Airport Area (15%)
- Downtown Miami (13%)
- South Miami (10%)
- Doral (6%)
- Coral Gables (6%)

2.1.3.1.2 Entertainment

The entertainment industry continues as an important part of the City's economy. The city remains a key location for the production of movies, fashion campaigns, and TV series. Many international talent and model agencies have retained operations in the city. The corporate segment of the industry considers the city to be an important entertainment

industry hub. The city continues to grow as a destination for major events. The Art Basel Miami Beach, the South Beach Food and Wine Festival, the South Beach Comedy Festival, the Miami Beach International Boat Show, and the Winter Music Conference continue to provide a strong base that supplements the leisure, convention and trade show segments.

2.1.3.1.3 Real Estate

In Miami Beach, condo sales fell 4.2% to 707, compared to 738 closings in the first quarter of 2017. Single-family home sales rose 5.2 percent to 81. The median sale price of a condo increased 11.8% to $380,000, and the median price of a house rose 16.7% to $1.4 million. Inventory grew 9.4% to 6,748 homes and condos, and properties spent about 80 days on the market before selling, a 44% drop compared to the first quarter of last year.

2.1.4 Land Use

With over 7 miles of beaches. 3 Golf Courses, 20 parks, art and culture, dining and nightlife, and world class shopping Miami Beach is a bustling city. Miami Beach is an island city of just 7.1 square miles that separates Biscayne Bay from the radiant blue waters of the Atlantic.

Refurbishment of the Art Deco Historic District, from café's, clubs and shopping along South Beach's Ocean Drive, Lincoln Road, and Washington Avenue; the international hotels and restaurants of Collins Avenue and Middle Beach; to the re-emerging neighborhood in North Beach, Miami Beach boasts a booming economy with tourism being the top industry. The City of Miami Beach has over 50,000 hotel rooms.

The Art Deco Historic District is located between 5th Street and 23rd Street, along Ocean Drive, Collins Avenue and Washington Avenue, consisting of more than 600 buildings built between 1923 and 1943. The Art Deco District is recognized by the National Register of Historic Places.

2.1.5 Hazard Identification

Identifying hazards is the first step in any effort to reduce community risk. All parts of the City of Miami Beach are vulnerable to these hazards, and often will have little or no warning before being impacted. The City is an active participant in Miami-Dade County's Local Mitigation Strategy, which is a Countywide, multi-jurisdictional effort to reduce the vulnerabilities of the communities of the County to future hazards of all types. The LMS is active before and after disaster events. Before disasters, the City of Miami Beach participates in technical analyses identifying potential hazards threatening the jurisdiction, defining vulnerabilities to those hazards, and formulating mitigation initiatives to eliminate or reduce those vulnerabilities. The mitigation initiatives are included in the City's portion of the countywide mitigation plan and are scheduled for implementation when the resources to do so become available.

The following chart depicts the probability risk by location of all of the natural hazards. The estimate of risk is based on the judgment of local planners and the LMS Working

Group regarding the likely frequency of occurrence of the hazard event based on the location of the jurisdiction to the hazard potentially occurring. Sea Level Rise probabilities were determined by potential future risk as identified in the map in the Sea Level Rise section. The rankings are Low (L), Medium (M), and High (H). Hazard profiles can be found in Appendix A.

Table 6: Hazards Identified by the Miami-Dade County 2020 Local Mitigation Strategy

Hazard	Risk Rating
Drought	Medium
Erosion	High
Flooding	High
Hurricane/Tropical Storm	High
Saltwater Intrusion	High
Sea Level Rise	High
Severe Storm	High
Tornado	High
Wildfire	Low
Winter Storm	Medium

The following natural hazards are included in the 2015 Miami-Dade County THIRA. These are Countywide vulnerability ratings that are not specific to the jurisdiction.

Table 7: Natural Hazards Identified by the Miami-Dade County 2015 THIRA

Hazard	Risk Rating
Animal and Plan Disease Outbreak	Medium
Dam/Dike Failure	Low
Drought	Medium
Earthquake	Low
Epidemic/Pandemic	Medium
Erosion	Medium
Extreme Heat	Medium
Flooding	High
Hail	Medium
Hurricane and Tropical Storm	High
Landslide	Low
Lightning	Medium
Saltwater Intrusion	Medium
Sea Level Rise	High
Severe Storm	Medium
Sinkholes	Low
Space (i.e. Meteorites, CMEs, Solar Flares)	Low
Tornado	Medium

Hazard	Risk Rating
Tsunami	Low
Volcano (i.e. Ash, dust)	Low
Wildfire	Medium
Windstorms	Medium
Winter Storms and Freezes	Medium

The following non-natural hazards are included in the 2015 Miami-Dade County THIRA. These are Countywide vulnerability ratings that are not specific to the jurisdiction.

Table 8: Technological Hazards Identified by the Miami-Dade County 2015 THIRA

Hazard	Vulnerability
Coastal Oil Spill	Medium
Electric Utility Failure	High
Hazardous Materials Release	Medium
Nuclear Power Plant Release	Low
Structural Fire	Medium
Transportation Incident (i.e. Highway and/or Rail Incident)	Medium
Water/Wastewater Incident	Medium

Table 9: Human-Caused Hazards Identified by the Miami-Dade County 2015 THIRA

Hazard	Vulnerability
Active Shooter	Medium
Civil Disturbance/Civil Unrest	Medium
Electromagnetic Pulse	Low
Food Borne Illness Incident	Medium
Mass Migration	Medium
Terrorism – Biological (Cat. A, B, C)	Low
Terrorism – Chemical	Low
Terrorism – Cyber	Medium
Terrorism – Explosive	Medium
Terrorism – Radiological	Low
Terrorism – Small Arms	Medium

3 CONCEPT OF OPERATIONS

This section of the CEMP describes the methods for the management of emergency activities during the response, recovery, and mitigation phases of an emergency or disaster. The major elements of this section include levels of emergencies or disasters, structure of organization, notification and warning, direction and control, initial and continuing actions necessary for response, recovery, and mitigation efforts.

DEM establishes this CEMP as a core set of functional processes, for the highest priority of emergency response and recovery management for the City of Miami Beach. Each emergency situation may have unique issues and priorities, and as such, DEM has adopted a multi-hazard approach to establishing an emergency response and recovery organization encompassing key City Departments and external agencies and entities that are involved in emergency response and recovery.

The City of Miami Beach EOC will be activated for all incidents requiring a significant dedication of resources and/or extraordinary inter-department coordination outside the realm of normal day to day emergency situations responded to by Law Enforcement, Fire and EMS agencies.

The EOC Operations Group, under the leadership of the EM Coordinating Officer will manage the City's response to emergencies or disasters

3.1 PHASES OF EMERGENCY MANAGEMENT

The City of Miami Beach Comprehensive Emergency Management Plan is one of the key documents that describe the programs, policies and responsibilities for activities conducted under the different "phases" of emergency management. Each phase of emergency management is closely interrelated to the other and spans 5 separate but contiguous phases: Prevention/Protection, Preparedness, Mitigation, Response, and Recovery.



Figure 5: Phases of Emergency Management

3.1.1 PREVENTION/PROTECTION

The Prevention and Protection missions are closely aligned and integrated. Prevention consists of actions that reduce risk from human-caused incidents, primarily terrorism. Prevention planning can also help mitigate secondary or opportunistic incidents that may occur after the primary incident. Incorporating prevention methods into the comprehensive planning process also helps identify information or intelligence requirements that support the overall planning process.

Protection activities, on the other hand, reduces or eliminates a threat to people, property, and the environment. Primarily focused on adversarial incidents, the protection of critical

infrastructure and key resources (CIKR) is vital to local jurisdictions, national security, public health and safety, and economic vitality. Protection planning safeguards citizens and their freedoms, critical infrastructure, property, and the economy from acts of terrorism, natural disasters, or other emergencies. It includes actions or measures taken to cover or shield assets from exposure, injury, or destruction. Protective actions may occur before, during, or after an incident and prevent, minimize, or contain the impact of an incident.

The following activities span the Prevention and Protection phase:

- Intelligence and Information Sharing: Providing timely, accurate, and actionable information concerning threats; Information sharing is the ability to exchange intelligence, information, data, or knowledge among government or private sector entities, as appropriate
- Interdiction and Disruption: Delay, divert, intercept, halt, apprehend, or secure threats and/or hazards; These threats and hazards include people, materials, or activities that pose a threat to the City
- Screening, Search, and Detection: Identify, discover, or locate threats and/or hazards through active and passive surveillance and search procedures
- Access Control and Identity: Apply and support necessary physical, technological, and cyber measures to control admittance to critical locations and systems
- Physical Protective Measures: Implement and maintain risk-informed countermeasures, and policies protecting people, borders, structures, materials, products, and systems associated with key operational activities and critical infrastructure sectors
- Cybersecurity: Protect (and if needed, restore) electronic communications systems, information, and services from damage, unauthorized use, and exploitation
- Risk Management for Protection Programs and Activities: Identify, assess, and prioritize risks to inform Protection activities, countermeasures, and investments

3.1.2 PREPAREDNESS

This is the phase when the City and its agencies and organizations develop and maintain their readiness or preparedness to manage the potential impacts of emergencies and disasters. This phase is actually continuous in time, and is interrupted occasionally for emergency response and disaster recovery activities. The emergency preparedness phase merges with the emergency response phase as preparations are made for known or anticipated emergency events.

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3.1.2.1 THE CITY'S EMERGENCY PREPAREDNESS PROGRAM

Pursuant to NIMS, the City of Miami Beach's Emergency Preparedness Team has been established to ensure the jurisdiction maintains its preparedness to implement the CEMP and to work towards enhancing and improving the capabilities to respond to disaster situations. The Emergency Preparedness Team consists of the City leadership and the City's Department Directors.

The City of Miami Beach maintains an ongoing emergency preparedness program that consists of the following elements:

- This organization meets on a routine basis and is responsible for the necessary intra-jurisdictional coordination of government actions to ensure the following:
    - The CEMP and all supporting documentation are maintained as current, and other actions needed to ensure readiness of the City for CEMP implementation are taken
    - City personnel are trained in their roles for implementation of the CEMP and all assigned personnel have the appropriate credentials and/or experience to effectively and safely implement those assignments
    - Implementation of the CEMP is exercised on the schedule and in the manner specified herein; All exercises are evaluated to identify improvements needed
    - Ongoing evaluation of the adequacy of the City's personnel, equipment, facility and supplies to implement the CEMP and to assure a level of capabilities commensurate with the risk exposure of the jurisdiction
    - Development and implementation of a "preparedness improvement plan" designed to address shortfalls in the City's emergency preparedness resources and capabilities
- The City is represented in inter-jurisdictional emergency preparedness planning and programming activities conducted by Miami-Dade County. These activities are designed to enhance coordination and cooperation among local jurisdictions and higher levels of government during response and recovery operations for major disasters. This representation includes City participation in Miami-Dade County's local hazard mitigation planning process and completion of efforts by the City to minimize the vulnerability to future disasters. The City is also represented at the Miami-Dade County EOC when Miami-Dade EOC is operating at Level 1.
- Designation of the Special Services Commander as the City's Emergency Management Coordinator to manage the day-to-day implementation of the City's emergency preparedness program and to support the City's Emergency Preparedness Team in fulfilling its responsibilities.

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- Participation in the Florida statewide mutual aid agreement and other specific mutual aid agreements with other jurisdictions and/or organizations so that supplemental personnel and resources can be available to the City more rapidly when needed; Development of pre-event contracts with local businesses to provide needed supplemental services
- Efforts to classify City personnel and equipment resources, and to certify their suitability for their intended emergency use, in accord with Federal guidance issued pursuant to the NIMS (National Incident Management System)
- Ensuring that all aspects of the City's emergency preparedness program remains consistent with applicable local, state and Federal requirements
- Implementing a public information and preparedness awareness program through the City's website, community-based education efforts, coordination with the private sector, and similar actions
- The City also works with Miami-Dade County in informing the public about the Special Needs Program aimed to provide individuals requiring medically enhanced sheltering or need transportation assistance during an evacuation.
- The City of Miami Beach Emergency Preparedness Team meets periodically during times of normalcy to address these responsibilities.

3.1.3 MITIGATION

Mitigation comprises of actions to avoid or minimize the community's vulnerability to the adverse physical, economic and operational impacts of disasters. Mitigation is prevalent in each of the other four phases of emergency management and can create opportunities and needs for actions that can achieve hazard mitigation objectives. By adopting the LMS, the city addresses mitigation measures in relation to the hazard risk and vulnerability assessments. Mitigation activities can include:

- Local ordinances and statutes (zoning ordinance, building codes and enforcement, etc.)
- Structural measures to harden existing buildings
- Public information and community relations
- Comprehensive land-use planning
- Risk and Disaster Resilience Assessment so that decision makers, responders, and community members can take informed action to reduce their entity's risk and increase their resilience
- Community Resilience to enable the recognition, understanding, communication of, and planning for risk and empower individuals and communities to make informed risk management decisions necessary to adapt to, withstand, and quickly recover from future incidents

- Long-term Vulnerability Reduction; Build and sustain resilient systems, communities, and critical infrastructure and key resources lifeline
- Threats and Hazards Identification; Identify the threats and hazards that occur in the geographic area; determine the frequency and magnitude; and incorporate this into analysis and planning processes

3.1.4 RESPONSE

Response embodies the actions taken in the immediate aftermath of an incident to save and sustain lives, meet basic human needs, and reduce the loss of property and the effect on critical infrastructure and the environment. Following an incident, response operations reduce the physical, psychological, social, and economic effects of an incident. Response planning provides rapid and disciplined incident assessment to ensure a quickly scalable, adaptable, and flexible response. It incorporates national response doctrine as presented in the NRF, which defines basic roles and responsibilities for incident response across all levels of government and the private sector. During response the City will follow basic NIMS/ICS concepts, procedures and structures to guide operations. Response activities can include:

- Establishment of Incident/Unified Command and associated staff, sections and branches (Command staff, operations, planning, logistics, finance/admin)
- Protective actions – Evacuation, sheltering, shelter in place, lockdown, etc.
- Incident assessment and objectives
- Development and implementation of strategies and tactics to achieve incident objectives
- Incident stabilization
- Warnings, notifications and communications
- Development of an Incident Action Plan (IAP)
- Resource management

3.1.5 RECOVERY

Recovery encompasses both short-term and long-term efforts for the rebuilding and revitalization of affected communities within the City. Recovery planning builds stakeholder partnerships that lead to community restoration and future sustainability and resiliency. As the emergency response operations are completed, activities needed to repair the damages that occurred from the event are initiated. The disaster recovery phase can be very brief, when the event has had little physical or economic impact on the community, to as long as months and years, when the damage has been extensive. The disaster recovery phase merges with the emergency preparedness phase as the community returns to normalcy and can focus on preparing for the next emergency or disaster. Disaster recovery activities include such actions as:

- Collecting and disposing of debris resulting from the event
- Restoration of interrupted utility services
- Repairing damages to the infrastructure
- Reestablishment of transportation routes
- Provision of food and shelter to displaced persons
- Implementing assistance programs to help the victims of the event return to normalcy

3.2 National Incident Management System (NIMS)

The National Incident Management System (NIMS) is a system mandated by Homeland Security Presidential Directive – 5 (HSPD-5) that provides a consistent nationwide approach for Federal, State, local and tribal governments; the private sector and non-governmental organizations (NGOs) to work effectively and efficiently together to prepare for, respond to and recover from domestic incidents, regardless of cause, size or complexity. The NIMS indicates the core set of concepts, principles and terminology for interoperability and compatibility between multiple jurisdictions as outlined in the Incident Command System (ICS).

The adaptable ICS structure is composed of major components to ensure quick and effective resource commitment and to minimize disruption to the normal operating policies and procedures of responding organizations.

Remember that NIMS bases incident management and coordination on fourteen NIMS Management Characteristics have been tested and proven over time—in business and industry and by response agencies at all governmental levels. ICS training is required to ensure that all who may become involved in an incident are familiar with ICS principles.

The fourteen NIMS Management Characteristics structure should include:

1. Common Terminology
2. Modular Organization
3. Management by Objectives
4. Incident Action Planning
5. Manageable Span of Control
6. Incident Facilities and Locations
7. Comprehensive Resource Management
8. Integrated Communications
9. Establishment and Transfer of Command
10. Unified Command

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11. Chain of Command and Unity of Command
12. Accountability
13. Dispatch/ Deployment
14. Information and Intelligence Management

The management model followed by the Miami Beach Emergency Operations Center (EOC) is based on the principles of the NIMS /ICS-like structure model. NIMS reiterates that while ICS is used to manage on-scene, tactical-level responses, EOCs are used to manage off-scene support to ICS. ICS has been recognized as the model for the command, control and coordination of resources and personnel in response to an emergency. This enables effective and efficient incident management by integrating the use of facilities, equipment, personnel, procedures and communications operating within a common organizational structure. The ICS-like structure management is structured to facilitate activities in five major functional areas: command, operations, planning, logistics and finance and administration.

The City of Miami Beach uses this management model to organize both short and long term operations to all emergencies and disasters, including natural and human-caused incidents. All levels of government (federal, state, local and tribal), as well as many private and non-governmental organizations utilize this model, which allows multiple agencies and jurisdictions to work together to accomplish the required response and recovery activities dictated by a disaster. These tasks are performed under the overall direction of the Director of Department of Emergency Management designed by the City Manager governed by the Policy Group. All participating departments and jurisdictions contribute to the determination of the incident objectives and strategy via the incident action plan, and the coordination to optimal utilization of all available resources in an integrated manner. This flexible management method allows expansion or contraction of response and recovery forces as dictated by the magnitude of the event.

3.3 Levels of Emergencies and Disasters

Florida Statute 252 defines a disaster as any natural, technological, or civil emergency that causes damage of sufficient severity and magnitude to result in a declaration of a State of emergency by a County, the Governor, or the President of the United States. F.S. 252 also identifies disasters by the severity of resulting damage, as noted below. DEM has developed a description of this classification of events that are outlined below.

- Catastrophic Disaster - A catastrophic disaster is any emergency that will require massive State and Federal assistance, including immediate military involvement. Miami-Dade County will be notified and potential Federal assistance will involve response as well as recovery needs.
- Major Disaster - A major disaster is any emergency that will likely exceed local capabilities and require a broad range of County, State and Federal assistance.

Miami-Dade County will be notified, and State and potentially Federal assistance will be required.

- Minor Emergency - A minor emergency is any emergency that is likely to be within the response capabilities of local government and results in only a minimal need for County, State or Federal assistance
- Emergency - An emergency is defined as any occurrence, or threat thereof, whether natural, technological, or manmade, in war or in peace, which results, or may result in substantial injury or harm to the population or substantial damage to or loss of property.

3.4 CLASSIFICATION OF EVENTS

The City of Miami Beach utilizes the same method as Miami-Dade County to classify disasters and levels of emergency response team, as follows:

Table 10: Classification of Events

	Incident	Minor Disaster	Major Disaster	Catastrophic Disaster
	A condition of significant peril to the safety of persons or property that typically comprises the following attributes:	A condition of extreme peril to the safety of persons or property that typically comprises the following attributes:	An exceptional threat to persons or property that typically comprises of the following attributes:	An extraordinary threat to persons or property that typically comprises of the following attributes:

	Incident	Minor Disaster	Major Disaster	Catastrophic Disaster
Event	• Usually an isolated event with an ordinary threat to life and property; • Usually involving a limited or small population; • Usually unpredictable • Usually demands immediate action to protect life, preserve public health or essential services or protect property; • Has a defined geographical area.	• Usually an isolated event with a significant threat to life and property; • Usually involving a limited population; • Usually unpredictable; • Usually demands immediate action to protect life, preserve public health or essential services or protect property; • Has a defined geographical area.	• Single or multiple event (can have other separate incidents associated with it); • Exceptional threat to life and property; • Generally widespread population and geographic area is affected.	• Single or multiple event (can have many other separate incidents associated with it); • Because of the severity of the event, some or all, local resources are unavailable or overwhelmed; • The fulfillment of the community's essential functions are prevented; • Extraordinary threat to life and property; • Widespread population and geographic area is affected.

	Incident	Minor Disaster	Major Disaster	Catastrophic Disaster
Response	• Usually only one to a few local agencies involved; • Typically does not exceed the capabilities of the agency(ies) involved; • Mutual aid is typically not applied; • A local emergency is not declared; • The EOC may be activated to a Level II; • Primary command decisions are made at the scene incident command post(s); • Strategy, tactics, and resource assignments are determined on the scene; • Usually a fairly short duration measured in hours.	• Usually only a few local agencies involved; • Typically does not exceed the capabilities of the agencies involved; • Mutual aid may or may not be applied; • A local emergency is not declared; • The EOC may be activated to a Level II; • Primary command decisions are made at the scene incident command post(s) or EOC; • Strategy, tactics, and resource assignments are determined on the scene; • Usually a fairly short duration measured in hours to days.	• Resource demand may be beyond local capabilities of the responding organizations or jurisdiction – significant mutual aid and support may be needed; • Many agencies and jurisdictions are involved – multiple layers of government; • The EOC is activated to at least a Level I to provide centralized overall command and coordination of jurisdictional assets, department, and incident support functions, and initial recovery coordination; • Will last a substantial period of time (days to weeks) and local government will proclaim a "local disaster."	• Resource demand greatly exceeds the local capabilities of the responding organizations or jurisdiction – extensive mutual aid and support are needed; • Many agencies and jurisdictions are involved – multiple layers of government; • The EOC is activated to a Level I to provide centralized overall command and coordination of jurisdictional assets, department, and incident support functions, and initial recovery coordination; • Will last a substantial period of time (weeks to months) and governmental agencies will make disaster declarations.

	Incident	Minor Disaster	Major Disaster	Catastrophic Disaster
Recovery	• Limited to short term recovery efforts (i.e., restoration of vital services and facilities); • Usually one to a few local agencies involved.	• Limited to short term recovery efforts (i.e., restoration of vital services and facilities); • Usually one to a few local agencies involved.	• Involves both short-term and long-term recovery efforts; • Generally all local agencies involved; • May require assistance from state agencies; • May require assistance from federal agencies.	• Involves both short-term and long-term recovery efforts; • All local agencies involved; • Requires assistance from state agencies; • Requires assistance from federal agencies, including immediate military involvement.

3.5 Emergency Proclamations

3.5.1 Local State of Emergency Declaration Process

Local and State governments share the responsibility for protecting their citizens from disasters, and for helping them to recover when a disaster strikes. In some cases, a disaster is beyond the capacity of the local government to respond. In these instances, they may request additional resources through the county and state to help them respond to an emergency event.

Pursuant with the City of Miami Beach Code of Ordinances, Chapter 26 – Civil Emergencies, Article II, Sec. 26-31 Declaration of Emergency – In General, Sec 8.5 –, the following pertains to a Local State of Emergency:

- Whenever the city manager determines that there has been an act of violence or a flagrant and substantial defiance of or resistance to a lawful exercise of public authority and that, on account thereof, there is reason to believe that there exists a clear and present danger of a riot or other general public disorder, widespread disobedience of the law, and substantial injury to persons or to property, all of which constitute an imminent threat to public peace or order and to the general welfare of the city; or whenever, during a declared state or local emergency pursuant to the provisions of F.S. ch. 252 or F.S. ch. 381, the city manager may declare that a state of emergency exists within the city's territorial jurisdiction.

3.5.2 County Emergency Declaration Process

The Mayor or the Chairperson of the Board of County Commissioners in the absence of the Mayor may declare a Local State of Emergency for a period of up to thirty (30) days for any or all areas of Miami-Dade County in response to the imminent threat of, or an occurring emergency or disaster. The Mayor or the Chairperson of the Board of County Commissioners in the absence of the Mayor must present to the Board an affidavit stating the reasons for the Declaration.

In the event of an emergency or disaster, the impacted counties will coordinate the emergency response effort within their political jurisdictions (County and municipalities). If necessary, a county will activate the Statewide Mutual Aid Agreement (SMAA) for the exchange of emergency mutual aid assistance with neighboring counties and among municipalities within the county. When the event is beyond the capacity of the local government, the county emergency management agency will request state assistance through the SERT, to be coordinated by the SERT Chief.

3.5.3 State Emergency Declaration Process

If the emergency or disaster has the potential to exceed the capabilities of counties or state agencies, the Governor, by executive order or proclamation, will declare a state of emergency for those impacted areas or areas in which the emergency or disaster is anticipated as defined in Section 252.36, Florida Statutes. Depending upon the type of emergency or disaster, a state of emergency will direct the execution of certain components of the CEMP and is a condition for requesting interstate mutual aid through the Emergency Management Assistance Compact (EMAC). These executive orders, proclamations, and rules have the force and effect of law in congruence with Section 252.36, Florida Statutes.

3.5.4 Presidential Emergency or Major Declaration

Pursuant to Title 44, Code of Federal Regulations, the Governor may request that the President of the United States issue an emergency or a major disaster declaration.

The basis for the Governor's request for an emergency declaration must be based upon a finding that the situation:

- Is of such severity and magnitude that effective response is beyond the capability of the state and the affected local government(s); and
- Requires supplementary federal emergency assistance to save lives and to protect property, public health and safety, or to lessen or avert the threat of a disaster

The basis for the Governor's request for a major disaster declaration must be based upon a finding that:

- The situation is of such severity and magnitude that effective response is beyond the capability of the state and affected local government(s); and

- Federal assistance under the Stafford Act is necessary to supplement the efforts and available resources of the state, local governments, disaster relief organizations, and compensation by insurance for disaster-related losses

3.6 City of Miami Beach

3.6.1 Emergency Authority

DEM is responsible for the coordination of all citywide response efforts relative to disasters. The Miami Beach Emergency Operations Center (EOC), once activated, is the facility in which all emergency and disaster preparations, response, and recovery activities are coordinated among the participating departments.

During times of disaster, the City Manager has the authority, to accomplish whatever actions are necessary to protect lives and property from the threat.

3.6.2 Use of Miami Beach Resources

All available resources owned or controlled by the City are used in emergency disaster operations and recovery activities when required. The County is kept apprised of all resources within the city that may be available for mutual aid.

3.6.3 Direction and Control

The City of Miami Beach EOC serves as the centralized direction and control point for all major disasters within the City. The Emergency Manager provides direction for City disaster operations. The DEM Coordinating Officer manages emergency operations with the assistance of the EOC Organization. Members of the EOC Organization maintain continual contact with their departments to ensure proper coordination of all disaster response and recovery operations.

The DEM Coordinating Officer will coordinate any required operational, logistical and administrative support needs of EOC Organization personnel. EOC Organization personnel will coordinate support needs for their personnel in the field with assistance from the EM Coordinating Officer, if necessary.

The City EOC is activated and managed by the Emergency Manager, EM Coordinating Officer or their representative. When activated, designated members of the City EOC Organization will provide representation at the City EOC. Under activation status, departments should be prepared to staff designated City EOC Organization positions on a 24-hour basis.

3.6.3.1 Local Disasters

During an actual or imminent major disaster, the City Manager will initiate an emergency meeting of the City of Miami Beach Policy Group and recommend such actions as a Declaration of a State of Local Emergency and/or an Evacuation Order. All executive orders or proclamations issued by the Miami Beach Policy Group shall indicate the nature of the disaster, the area or areas threatened, and the conditions creating the disaster or threat. The contents of such orders shall be promptly disseminated to the general public.

As a result of a localized disaster such as a tornado, flooding, fire or hazardous materials incident, the Emergency Manager, or his/her representative, will activate portions of this plan as required to meet the emergency situation. The principle of graduated response will be used in dealing with a localized disaster. The initial response will come from emergency personnel and equipment located within the City of Miami Beach. Additional resources can be brought to bear by the City EOC if the situation warrants.

3.6.3.2 Major Disasters

While a local disaster may occur in a specific section of the City, a major disaster like a hurricane can affect the entire State of Florida. The destructive nature of the disaster will require a coordinated response between each level of government and other response departments in the City.

The City Manager may activate portions of this plan in preparation for a major disaster.

Evacuation of one city or county will critically affect, and be affected by, the concurrent evacuation of adjacent counties. Continuous communication and coordination between the cities and counties of the South Florida Region are imperative to ensure an efficient, effective evacuation of the vulnerable areas. Of primary importance is the exchange of information between City and County decision-makers, through their EOC, concerning scenario identification and timing for issuance of evacuation orders.

Emergency transportation will be provided to assist during evacuation. Buses and vans will transport evacuees unable to drive or without transportation. Buses, ambulances and special vehicles will be needed to evacuate hospitals in vulnerable areas, if necessary. Plans include procedures to assist the elderly and disabled during any mass evacuation.

Re-entry into damaged areas will be strictly controlled. Response and recovery operations will be coordinated by the City of Miami Beach EOC. As the recovery process continues, the various response departments at their normal operating locations may assume coordination of long term recovery activities

3.6.4 EOC Activation

In some cases, upon the recommendation of the Director of Emergency Management to activate the EOC, a request is made to the Miami Beach City Manager for a Declaration of a State of Local Emergency. In accordance with Section 26.31, the City Manager is authorized to make such a declaration at his/her determination. The authorizing resolution and an unsigned copy of the declaration are maintained with Miami Beach Emergency Management and City Clerk's Office.

- The Governor of the State of Florida may, at his/her discretion, declare a State of Emergency and activate this plan through the Mayor.
- The City Manager may, at his/her discretion, declare a State of Emergency and activate any portion of this plan. Upon Declaration of a State of Local Emergency, the City Manager or a Designee may direct the evacuation of risk areas. At this

time schools and business may be directed to cease operations until the emergency has passed.

- If a situation precludes the timely authorization by the City Manager, the Emergency Manager will activate the plan and take such actions, authorized by this plan, as previously approved by the Miami Beach City Commission.

In the event of an incident or disaster, the Incident Commander (IC) directs the overall management of all related activities including the development and implementation of strategy through incident action planning and approves the ordering of and release of resources.

Upon request of the Emergency Manager, City departments and response agencies send representatives to the City of Miami Beach EOC. Upon arrival, the representative(s) receive his/her assignment and an incident briefing. Some departments may need to send more than one (1) representative if the department is required to perform several functions.

A policy group comprised of the Mayor, City Manager, appropriate department heads and other senior officials may be assembled as an advisory group in order to provide assistance in the establishing policies.

When activated, the City of Miami Beach EOC is responsible for the following objectives:

- Implement and manage incident response operations;
- Implement and manage incident recovery operations;
- Coordinate, and/or act as a liaison with appropriate Federal, State, County and municipal governmental agencies, and the private sector;
- Approve mutual aid requests;
- Establish incident response and recovery objectives and strategy in the IAP;
- Establish priorities and resolution of conflicting resource demands; and
- Prepare and issue emergency public information.

The City of Miami Beach DEM is constantly monitoring for threats, unusual events, or situations. The Emergency Manager is on-call 24 hours a day, 7 days a week, and is advised of any such events by PSCD, County and State Warning Point, concerned citizens, or other agencies. The Emergency Manager also has the responsibility to monitor and follow up on any threat, unusual event, or situation that has the potential to impact the City of Miami Beach, such as media reports, weather advisories, etc. It is important to note that since the DEM is constantly monitoring the progression of events within the City, the EOC is always considered activated.

The expected or actual severity of the incident is paramount in determining the level of activation. The Emergency Manager or designee, in conjunction with the City Manager, has the responsibility of determining whether DEM should increase or decrease its level

of activation. The purpose of activating the EOC as a result of a disaster is to centralize response and recovery decisions, plans, and operational activities in order to maximize the efficiency, quality and quantity of resources.

Upon activation of the EOC, WebEOC is utilized to document and share information among EOC representatives, the County and regional partners. This information management tool is also used to track mission tasks and resource requests. When needed, these resource requests are relayed to the County via WebEOC.

3.6.4.1 EOC Activation Levels

The purpose of activating the EOC as a result of a disaster is to centralize response and recovery decisions, plans, and operational activities in order to maximize the efficiency, quality, and quantity of resources.

The Miami Beach EOC operates at one of three levels of readiness in order to carry out its mission. These levels are described below and closely match the Miami-Dade County and Florida Division of Emergency Management (FDEM) EOC activation levels to maintain consistent definitions, with compliance with NIMS 2017 updates.

Miami Beach DEM continuously monitors the city for threats, unusual events, or situations. The Emergency Manager is on-call 24 hours a day, 7 days a week, and is advised of any such events by the Fire Public Safety Communications Division (PSCD), County Warning Point, Southeast Florida Fusion Center, State Warning Point, concerned citizens, or other agencies. The Emergency Manager also has the responsibility to monitor and follow-up on any threat, unusual event, or situation that has the potential to impact the City such as media reports, weather advisories, etc. It is important to note that since the DEM is constantly monitoring the progression of events within the city, the EOC is always considered activated. The expected or actual severity of the incident is paramount in determining the level of activation. The Director of Emergency Management or designee with the City Manager has the responsibility for determining whether the level of activation should increase or decrease.

3.6.4.1.1 Level Three: Monitoring & Assessment

Level III Normal Operations / Steady State is typically a monitoring phase where a specific threat, unusual event, or situation, is actively monitored and potential threats are assessed by the DEM. A Level III activation is an internal process and involves little, if any, inter-agency direction or coordination. The threat, unusual event, or situation simply warrants observation, verification of appropriate action, and follow-up by DEM staff. Events or incidents that occur during Level III activation can generally be resolved in a brief period of time using very few resources. Level III activation does not require the DEM to significantly alter daily operations or management structure.

Upon notification of the existence of a threat, unusual event, or situation, the Fire Public Safety Communication Division will evaluates the situation, and, if conditions warrant, notifies the Emergency Management Director or designee. Appropriate agencies are

alerted, advised of the situation, and instructed to take appropriate action as part of their everyday responsibilities.

At times, it is appropriate to hold briefings or staff meetings to respond to, or mitigate the situation, but no Incident Action Plan (IAP) is developed or distributed. Other DEM staff may become involved but the Duty Officer will remain the primary point of contact for the incident.

3.6.4.1.2 Level Two: Partial

Level II Enhanced Steady-State / Partial Activation is typically a partial activation of EOC positions. DEM staff and appropriate ESF lead agencies with a role in the incident response are activated and required to report to the EOC. All other ESFs are alerted of the event and are on standby. The purpose of Level II activation is to initiate preparations due to a significant threat of a disaster or to coordinate response due to the occurrence of a minor disaster. During Level II activation, the EOC may be operational 24 hours a day.

During Level II activation, the DEM disseminates information to, and begins coordination of preparedness and response actions with, external agencies, Miami-Dade County EOC, and city departments tasked in emergency response. The incident command system (ICS) is implemented and the four (4) sections along with the branches may be activated.

The EOC Command and General Staff develop and implement an Incident Action Plan (IAP). The IAP is the work plan for everyone, including the Mayor and Commission, Department Directors and their staff. EOC personnel are briefed on the IAP and pertinent items are posted on the EOC status boards. In most cases, the Mission Tracking & Message Control Center, Geographic Information Systems (GIS) services, and the Public Information (ESF 14) are activated. Depending upon the event, any appropriate logistical support elements such as security, food unit, transportation, etc. may also be activated.

3.6.4.1.3 Level One: Full-Scale

Level I Full Activation a full-scale activation, the EOC is activated on a 24-hour schedule due to an imminent threat or occurrence of a disaster. All DEM staff and all ESFs are activated and required to report to the EOC. If requested, a Municipal Branch Representative from the City reports to the County EOC. The ICS is implemented and all sections and branches are activated. As in Level II activation, the IAP establishes the operational objectives and priorities of the incident. Additionally, all logistical support elements are activated.

At this level, response, relief, and recovery operations are expected to last for an extended period of time. Additional support or back-up staff, including any applicable Mutual Aid Agreements, is notified and available to assist should the response escalate and exceed local capability.

3.6.5 EOC Structure

Miami Beach utilizes a bottom-up approach in all phases of emergency management, with emergency activities resolved at the lowest appropriate level of government. The resources of departmental, agency, municipal, county, state, and the federal governments are utilized in sequential order to insure a rapid and efficient response.

The Miami Beach EOC's response to, and recovery from, a disaster is carried out through the organizational structure depicted in Figure 9. The Director of Emergency Management leads the EOC and appoints command staff, including Section Chiefs, Branch Directors Municipal Liaison Officer to the county, and a Public Information Officer (PIO). The Section Chiefs, typically DEM staff or department heads, appoint subordinate staff. Branch Directors are also typically department division heads. ESF lead agencies are pre-determined pursuant to this plan.

3.6.5.1 EOC Sections

The City of Miami Beach EOC is organized so that maximum advantage can be made of the many interdisciplinary skills and resources that exist on an everyday basis throughout City Departments and outside support organizations. As illustrated in the EOC Organization Chart (see Figure 9), these departments are assigned as Emergency Support Functions, based on the type of normal services they perform, are arranged into four distinct functionally oriented groups in order to maintain a proper span of control. These sections are based on the ICS. The four sections include:

- Operations Section
- Planning Section
- Logistics Section
- Finance/Administration Section

Each department representative serves as the primary contact and coordinator for his/her respective department within one of the four sections. The representative may also serve the role as lead or support to a different section. As such, the responsibilities of this individual exceed simple representation and coordination of his/her respective department's activities. The DEM has assigned staff to support sections. During activations, as well as throughout the year, the Section Lead is responsible for coordination of the interactive efforts of all the members of the ESFs in their Section. Section Leaders maintain a line of communication with the Operations Section Chief for requesting and reporting on incident objectives and response/recovery actions. Section Leaders are expected to communicate with and request information from the Operations, Planning, Logistics and Finance/Administration Sections.

The role of each Section in the EOC is to:

- Work jointly to devise solutions for identified or projected problems;

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- Work jointly to capitalize on opportunities to share information, professional and technical skills, and personnel and equipment;
- Work together to track the collective status and actions of the Section;
- Anticipate upcoming needs, potential problems and solutions that relate to the Section;
- Provide and/or coordinate requested support for Section members; and
- Advise support agencies of decisions, actions, and instructions.

Emergency Operations Center (EOC) staff establish operational priorities, ensures development and implementation of strategies to meet the needs of the emergency, works with Policy Group on issues related to emergency response and recovery, communicates with the media, coordinates response with outside agencies including federal and state resources, and ensures the safety of the responders. Flexibility is a guiding principle in NIMS, meaning that NIMS structures are adaptable to any situation. This applies well to EOCs which have a common organizational structure equivalent to ICS, and vary widely in terms of authorities, resources, and missions.

There are five major components of the Miami Beach EOC ICS. These five components carry out the management responsibilities of the EOC:

1. Command Staff
    a. The City Manager or designee, is the lead for the Policy Group that includes the Emergency Manager, The Emergency Manager has overall responsibility for coordination of the EOC and individual incident commanders in the field will coordinate with their representative in the Operations Section in the EOC.
    b. In addition, the Emergency Manager is responsible to coordinate activities such as developing and implementing strategies, the ordering and release of resources, the provision of information to internal and external stakeholders and establishing and maintaining liaisons with other agencies participating in the incident.
2. Operations Section:
    a. The Operations Section is made up of representatives from the various Emergency Support Functions (ESFs). The director typically has one person assigned to coordinate and support the ESF representatives and additional personnel organized according to the structure needed for the incident(s) / event(s).
    b. The operations section is responsible for the coordination of all operations directly applicable to the primary mission, including reducing the immediate hazard, saving lives and property, establishing situation control, and restoring normal conditions.

c. The Operations Section Chief activates and supervises organizational elements in accordance with the IAP and directs its execution.

3. Planning and Information Section:

   a. The Planning section is responsible for the coordination collection, evaluation, and dissemination of information about the incident and the status of resources.

   b. This Section maintains information and intelligence on the current and forecasted situation, as well as the status of resources assigned to the incident(s) / event(s). The Planning Section prepares and documents, IAPs and incident maps, and gathers and disseminates information and intelligence critical to the incident.

4. Logistics Section:

   a. The Logistics Section is responsible for providing coordination of facilities, services, and material in support of the response and recovery operations, such as ordering resources and providing facilities, transportation, supplies, equipment maintenance and fuel, food service, communications, and medical services for incident personnel.

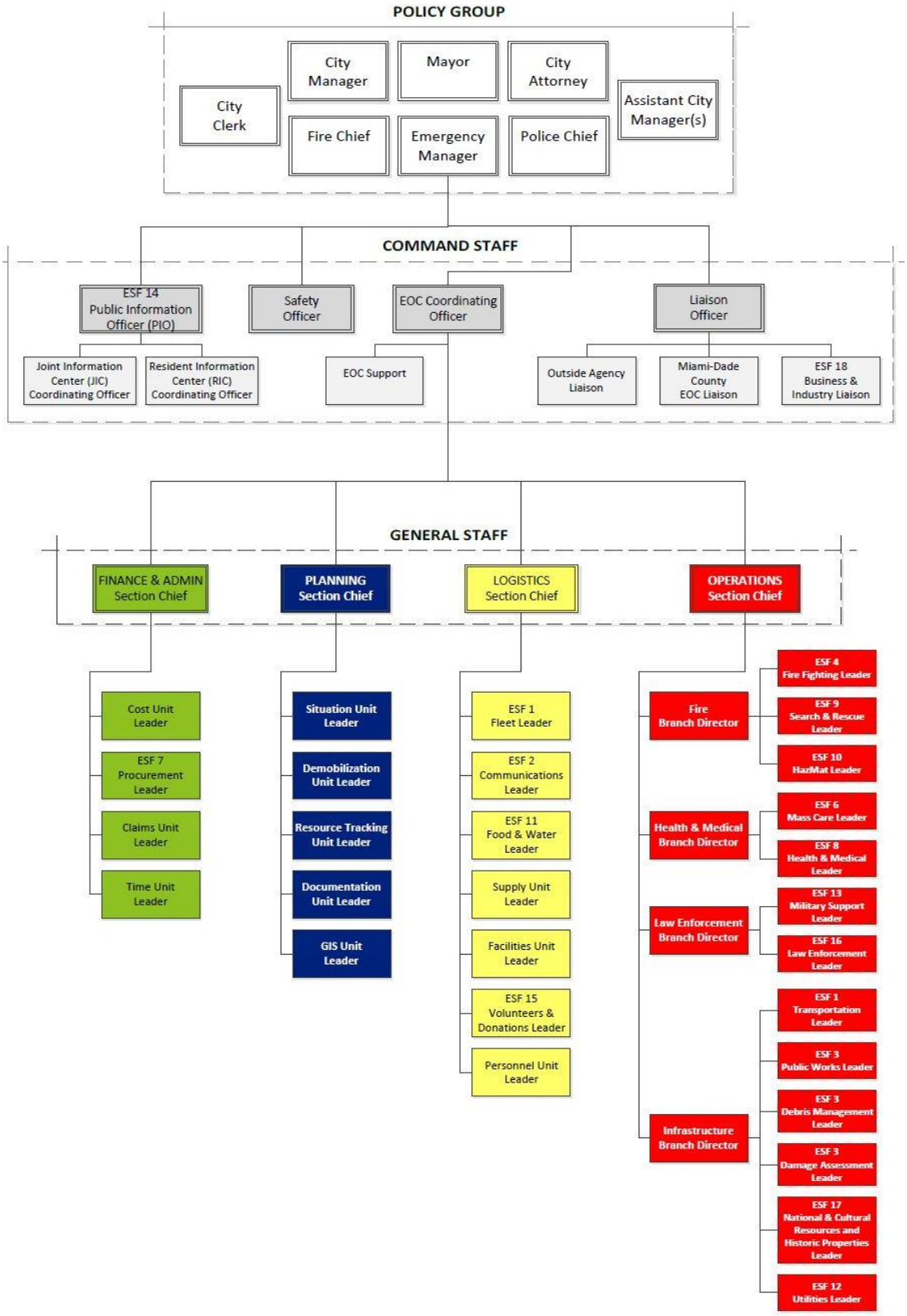
   b. The Logistics Section Chief participates in the development of the incident action plan and activates and supervises the units within the logistics section.

5. Finance and Administrative Section:

   a. The Finance/Administrative Section is responsible for the coordination of organization, management, and operation of activities related to the administrative and fiscal aspects of the event. These activities are administered within the guidelines, policies, and constraints, established by the City Manager and other departments such as the City Finance and Procurement, and state and federal agencies (e.g., FEMA). The Finance/Administration Section addresses the specific need for financial and/or administrative services to support incident management activities. Large or evolving scenarios involve significant funding originating from multiple sources. In addition to monitoring multiple sources of funds, the Section Chief must track and report to the accrued cost as the incident progresses. This allows for the forecast of additional funds. The Section Chief may also need to monitor expenditures to ensure that applicable statutory rules are met.

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Figure 6: Miami Beach EOC Organizational Chart



3.6.5.2 EOC Branches

The Miami Beach EOC Operations Section is organized so that maximum advantage can be made of the many interdisciplinary skills and resources that exist on an everyday basis throughout city departments and outside support organizations. As illustrated in the EOC Organizational Chart (Figure 9), in order to maintain a proper span of control, these departments proved functions, based on the type of normal services they perform, are arranged into ESFs assigned to four distinct functionally oriented branches:

- Infrastructure;
- Health and Medial;
- Law Enforcement; and
- Fire

Each department representative serves as the primary contact and coordinator for his/her respective agency within one of the four branches. The representative may also serve the role as lead or support ESF. As such, the responsibilities of this individual go beyond simple representation and coordination of his/her respective agency's activities. DEM has assigned staff to each branch. During activations, as well as throughout the year, the Branch Director is responsible for coordination of the interactive efforts of all the members of the branch.

Branch Directors maintain a line of communication with the Operations Section Chief for requesting and reporting on incident objectives and response/recovery actions. Branch Directors are expected to communicate with, and request information from, the Logistics, Planning, and Finance/Administrative Sections.

The role of each branch is to:

- Work jointly to devise solutions for identified or projected problems;
- Work jointly to capitalize on opportunities to share information, professional and technical skills, and personnel and equipment;
- Work together to track the collective status and actions of the branch;
- Anticipate upcoming needs, potential problems and solutions that relate to the branch;
- Provide and/or coordinate requested support for branch members; and
- Advise support agencies of decisions, actions, and instructions.

3.6.5.2.1 Fire Branch

The Fire Branch is led by Fire/Rescue that can include, but not limited to City of Miami Beach ESF 4, 9 and 10. This branch is responsible for monitoring and coordinating fire/rescue, USAR, hazardous materials and a number of related activities provided through mutual aid.

3.6.5.2.2 Health and Medical Branch

The Health and Medical Branch is led by Fire/Rescue and can include, but not limited to City of Miami Beach ESF 6 and 8. This branch is responsible for monitoring and coordinating mass care, medical services, disaster mental health, and public health. The Health and Medical Branch assists, as necessary, county, state and federal agencies in providing individual and family disaster relief offered through disaster assistance programs.

3.6.5.2.3 Infrastructure Branch

The Infrastructure Branch is led by Public Works. That can include, but not limited to City of Miami Beach ESF 1,3,12, and 17. This branch is responsible for monitoring and coordinating communications, response and recovery actions relative to flooding, drainage matters, debris clearance, damage assessment, critical facilities, utilities, transportation, natural and cultural resources, historic properties and engineering.

3.6.5.2.4 Law Enforcement Branch

The Law Enforcement Branch is led by Police. That can include, but not limited to City of Miami Beach ESF 13 and 16. This branch is responsible for monitoring and coordinating law enforcement, security, traffic activities, evacuation and re-entry, and a number of activities provided through mutual aid. This branch would also coordinate Military Support if used as a law enforcement function to include pre-deployment of the Florida National Guard and the United States Armed Forces.

3.6.5.3 Emergency Support Functions

Emergency Support Functions (ESFs) are then established within the associated branch. ESFs represent groupings of types of assistance activities that the City is likely to need in times of emergency or disaster. During emergencies, the City Manager or designee, determines which ESFs are activated to meet the disaster response needs.

Table 11– Miami Beach Emergency Support Function (ESF) Assignments

ESF	Title	Lead or Co-Lead Agency/Department
1	Transportation	Fleet Management / Transportation Department
2	Communications	Information Technology / Fire – Public Safety Communications Division
3	Public Works and Engineering	Public Works Department
4	Firefighting	Fire Department
5	Information and Planning	Department of Emergency Management

ESF	Title	Lead or Co-Lead Agency/Department
6	Mass Care	Office of Housing and Community Services
7	Logistics & Resource Support	Procurement Department
8	Health and Medical Services	Fire Department
9	Search and Rescue	Fire Department
10	Hazardous Materials	Fire Department
11	Food and Water	Procurement Department
12	Utilities	Public Works Department / FPL
13	Military Support	Police Department
14	Public Information	Office of Marketing and Communications
15	Volunteers and Donations	Human Resources
16	Law Enforcement	Police Department
17	Natural & Cultural Resources and Historic Properties	Environment & Sustainability Department / Tourism & Culture Department / Planning Department
18	Business and Industry	Economic Development Department / Tourism & Culture Department

3.6.5.4 DIVISIONAL EOC RESPONSIBILITIES

In order to facilitate effective coordination and communication between Miami-Dade County and its 34 municipalities, the municipalities have been grouped into seven divisions. Each division has identified a host city to act as the liaison with the Miami-Dade EOC during times of disaster. The host cities are commonly known as Divisions with a selected municipal branch representative and the cities within their division are commonly known as Satellite EOCs. The City of Miami Beach serves as one of the Divisional EOCs, but does not have any Satellite EOCs within our Division. Miami Beach holds a unique position as a stand-alone municipal EOC, but is considered a Divisional EOC.

The City of Miami Beach will provide a representatives/liaison to serve on the Miami-Dade County EOC Municipal Branch under their Operations Section, to coordinate activities between County and City response and recovery elements.

The Municipal Liaisons are responsible for:

1. Monitoring and coordinating the response and recovery activities of the City through the Municipal Branch EOC chain-of-command.

2. Providing or coordinating requested support for the City.
3. Working closely with other members of the Command Section to capitalize on opportunities to share information, professional and technical skills, and personnel and equipment.
4. Working jointly as a municipal branch and with their respective counterparts to devise solutions for identified or projected problems.
5. Working together to track the collective status and actions of the municipal branches and satellite municipalities.
6. Anticipating upcoming needs and potential problems.
7. Informing municipal branches and satellite municipalities of executive decisions, actions, and instructions.

Each of the 34 municipalities within Miami-Dade County is responsible for planning and responding to events occurring within its jurisdiction. If an emergency or disaster occurs in which the City exhausts our resources, we may request the assistance of Miami-Dade County through our assigned County Liaison Officer. The Municipal Branch Representatives are included in the Operations Section of the Miami-Dade EOC. Municipalities are encouraged to participate in the Statewide Mutual Aid Agreement for disaster response and recovery and are aware that they must submit requests for mutual aid through the Miami-Dade EOC. A county OEM Coordinating Officer is responsible for interacting with Municipal Branch Representatives to assist with issues and requests.

3.6.5.5 Message and Information Flow

The City of Miami Beach EOC has an established message control system, which is outlined in the EOC Standard Operating Procedures (SOP).

Actions to be undertaken in the EOC will originate from various sources including the general public, response agencies in the field, and other City, County or State agencies, etc. Actions that originate from the public will be routed to the Resident Information Center (RIC), where the RIC phone operators will answer and handle calls for general information. RIC phone operators will submit for response all valid incoming messages.

Each ESF/agency representative will enter any actions taken as a result of incoming information into WebEOC, monitored by the Call Center, where information is entered into the message control system. Periodically, the EOC Coordinating Officer may review the message system to ensure actions have been completed satisfactorily.

Messages directing the commitment of resources or personnel in the field, or other command centers will be made available to the appropriate Section Chief through WebEOC. by the ESF/agency directing the action.

The RIC SOPs contains more detailed information on the RIC messaging system.

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3.6.5.5.1 Communication Systems

Communications systems are used during emergency operations to support the direction and control of operations. Systems including landline and cellular telephone and radio systems may be utilized.

MBAlert, a notification system used by the City of Miami Beach, is capable of sending alerts to the public via text messages, e-mail and cell phone calls, in addition to land lines. This system of communications and warning to ensure that the city's population are warned of developing emergency situations and can communicate emergency response decisions to the general public.

3.6.6 Miami Dade County

Miami-Dade County governing structure has an elected official, Executive Mayor, and the Board of County Commissioners with 13 elected members, each serving a four-year term. The mayor is not a part of the board of commissioners but has the veto power over the board. The Mayor oversees the operations of the County. The Commission is the legislative branch that oversees the legislation, creates departments, and business operations. Miami-Dade County is the only county in Florida where the Sheriff is appointed by the County Mayor and is not elected by the residents. The office of Florida's Constitution oversees both the administrative branch and legislative branch with four elected officials.

3.6.6.1 Roles & Responsibilities

Responsibilities of the Miami-Dade County Government during an emergency or disaster include:

- Maintaining an emergency management program at the County level involving all government, private and volunteer organizations which have responsibilities in the comprehensive emergency management system within the County, and that is designed to avoid, reduce and mitigate the effects of hazards through the enforcement of policies, standards and regulations.
- Coordinating the emergency management needs of all municipalities within the County and working to establish intra-county mutual aid agreements to render emergency assistance.
- Implementing a broad-based public awareness, education and information program designated to reach all citizens of the County, including those needing special media formats, who are non-English speaking, and those with hearing impairment or loss.
- Executing mutual aid agreements within the State for reciprocal emergency aid and assistance in the event that a situation is beyond the County's capability.
- Maintaining cost and expenditure reports associated with disasters, including resources mobilized as a result of mutual aid agreements.

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- Developing and maintaining procedures to receive and shelter persons evacuating within their political jurisdiction and those persons evacuating from outside into their jurisdiction with assistance from the State.
- Ensuring the County's ability to maintain and operate a 24-hour warning point with the capability of warning the public.

OEM is responsible for the coordination of all countywide response efforts relative to disasters. The Miami-Dade County Emergency Operations Center (EOC), once activated, is the facility in which all emergency and disaster preparations, response, and recovery activities are coordinated among the participating agencies.

During times of disaster, the County Mayor has the authority, under Section 8B, Miami-Dade County Code, to accomplish whatever actions are necessary to protect lives and property from the threat. In the event of a Countywide Emergency Declaration, the resources of the County and each of its municipalities work together for the mutual benefit of all residents and visitors of Miami-Dade County.

3.6.6.2 County Assistance

All available resources owned or controlled by Miami-Dade County are used in emergency disaster operations and recovery activities when required. The State is kept apprised of all resources within the county that may be available for mutual aid.

3.6.6.3 County Agencies

Multiple MDC agencies provide assistance to Miami Beach in response to incidents on a day-to-day basis. Miami-Dade Office of Emergency Management, Department of Regulatory & Economic Resources, Miami Dade Parks, Recreation and Open Spaces, Department of Solid Waste Management, and Department of Transportation & Public Works are examples of some county agencies that provide assistance. When the Miami-Dade EOC is activated, those state agencies that have operating locations in Miami-Dade County are considered local resources, and are assigned responsibilities under the County CEMP.

3.6.7 State of Florida

3.6.7.1 Roles & Responsibilities

The State of Florida through FDEM acts to support and supplement Miami-Dade County's response efforts. FDEM supports the local response efforts through the activation of the State of Florida's CEMP. The FDEM may activate the State Emergency Operations Center (SEOC) to an appropriate level based on the expected conditions of the disaster. If the disaster is imminent, the Governor is likely to issue an Executive Order declaring a state of emergency. The Executive Order specifies the supplies, equipment, and personnel the state can deploy to assist the areas covered under the Executive Order. If the Governor is not able to issue an Executive Order due to time constraints, the Director of the SEOC is authorized to activate the state's disaster plans and initiate emergency response actions.

When the state activates the SEOC, the Governor appoints a State Coordinating Officer (SCO) who in turn appoints a Deputy SCO for response. The Deputy SCO for response designates the State Emergency Response Team (SERT) leader, an Operations Chief, Information and Planning Chief, and support staff. The SERT is grouped into functional groups known as Emergency Support Functions (ESFs). The SERT can deploy the resources of its various agencies to support and supplement the response efforts at the county level. The nature of the emergency determines which of the State's ESFs are activated to support the County's response efforts.

The State sends a SERT liaison, usually the FDEM Area Coordinator, to Miami-Dade County in order to provide a personal communication link with the SEOC. The SERT liaison offers his/her technical assistance and is responsible for relaying resource requests from Miami-Dade County to the SEOC.

Responsibilities of the State of Florida include:

- Receive, evaluate, and issue information on emergency operations.
- Coordinate the activities of all state agencies.
- Coordinate the receipt, allocation, and delivery of resources supplied by the state or federal government or other states.
- Coordinate emergency operations mutual aid with other states.
- Receive, process and transmit requests for mutual aid or state/federal assistance.

3.6.7.2 Florida Division of Emergency Management (FDEM)

Responsibilities of the FDEM include:

- Maintaining an emergency management program at the State level involving all government, private and volunteer organizations which have responsibilities in the comprehensive emergency management system within Florida.
- Maintaining a broad based public awareness, education and information program designated to reach a majority of the citizens of Florida, including citizens needing special media formats, such as non-English speaking individuals.
- Supporting the emergency needs of all counties by developing reciprocal intra- and inter-state mutual aid agreements, in addition to coordinating assistance from the FEMA.
- Maintaining direction and control of a State response and recovery organization, based on ESFs, involving broad participation from State, private and voluntary relief organizations, that are compatible with the NRF.
- Developing and implementing programs or initiatives designed to avoid, reduce and mitigate the effects of hazards through the development and enforcement of policies, standards and regulations.

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- Coordinating State activations with Florida Volunteer Organizations Active in Disasters (VOAD). Ensuring that these organizations are identified and organized under the ESF 15/Volunteers and Donations Unit of the State Emergency Response Team (SERT).
- Coordinate State activities with Florida's business community and its organizations to ensure broad and comprehensive coverage of assistance and relief during a disaster.
- Promote mitigation efforts in the business community with emphases on the State's infrastructure.
- Identify critical industry and infrastructure that may be impacted by disaster or are required for emergency response efforts.
- Review and analyze the State CEMP against national criteria to ensure compliance with goals, procedures, and benchmarks that guide Emergency Management programs.

3.6.7.3 GOVERNOR OF FLORIDA

Under the provisions of Section 252.36, Florida Statutes, the Governor is responsible for meeting the dangers presented to the State and its people by emergencies. In the event of an emergency beyond the control or capability of local governments, the Governor may assume direct operational control over all or any part of the Emergency Management functions within the State. Pursuant to the authority vested in that position under Section 252.36, the Governor may:

- Declare a State of Emergency to exist through the issuance of an Executive Order or Proclamation.
- Activate the response, recovery and mitigation components of existing State and local emergency plans.
- Serve as Commander in Chief of the organized and voluntary militia and of all other forces available for emergency duty.
- Authorize the deployment and use of any forces, supplies, materials, equipment and facilities necessary to implement emergency plans.
- Suspend the provisions of any regulation, statute, order or rule prescribing the procedures for conducting government business if compliance would in any way hinder or delay necessary emergency actions.
- Utilize all available resources of the State and local governments, as reasonably necessary to cope with the emergency.
- Transfer the direction, personnel and functions of State agencies to assist in emergency operations.

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- Commandeer or utilize any private property necessary to cope with the emergency.
- Direct and compel the evacuation of all or part of the population from any threatened or stricken area.
- Prescribe routes, modes of transportation, and destinations for evacuees.
- Control ingress and egress to and from an emergency area, the movement of persons within the area, and occupancy of premises therein.
- Suspend or limit the sale, dispensing or transportation of alcoholic beverages, firearms, explosives or combustibles, if necessary.
- Make provisions for the availability of temporary emergency housing.

3.6.7.3.1 Governor's Authorized Representative (GAR)

Section 252.36, Florida Statutes, authorizes the Governor to delegate or otherwise assign his/her command authority and emergency powers as deemed prudent. The Governor may appoint the Chief of Staff and/or the State Director of Emergency Management as his/her GAR, to act on his/her behalf in carrying out the provisions of Chapter 252, Florida Statutes.

3.6.7.4 State Assistance

When a disaster is beyond the capabilities of City of Miami Beach and Miami-Dade County resources, the Miami-Dade County EOC will request assistance from the State. The State EOC will coordinate assistance provided to the County.

The State of Florida provides assistance to impacted counties when the resources of the affected county and its municipalities have been exhausted. Requests for and deployment of resources are approved and coordinated by the State Emergency Response Team (SERT).

The Statewide Mutual Aid Agreement for Emergency Response/Recovery is the primary system that the State employs to support the county level disaster. All counties and municipalities within the State of Florida are authorized to enter into mutual aid agreements for emergency assistance. Those participating have the ability to access emergency resources throughout the State of Florida and also agree to make resources within their jurisdiction available to others in need, to the extent possible. Miami-Dade County has signed and adopted the Statewide Mutual Aid Agreement.

Through the statewide Mutual Aid Agreement, the State Emergency Response Team (SERT) can coordinate mutual aid requests from the affected counties. When utilizing this service, Miami-Dade County makes every effort to locate the desired resource and identify the location, contact name, and contact telephone number of the resource to the SERT.

Assistance is provided in the form of State of Florida RECON Teams. These teams are composed of unaffected county/state emergency management and other emergency workers. RECON Teams are deployed to assist in the "needs assessment" of the affected communities. After coordinating with local officials, an assessment of transportation,

communications, and utility systems is completed to determine resources required. An assessment of food, water, health, medical, and housing needs is also accomplished.

3.6.7.5 State Agencies

Many state agencies provide assistance to Miami Beach, Miami-Dade County and other county municipalities in response to incidents on a day-to-day basis. Florida Department of Transportation (FDOT), Florida Highway Patrol (FHP), Florida Department of Environmental Protection, and the Florida Department of Health (FDOH) are examples of some state agencies that provide assistance. When the Miami-Dade EOC is activated, those state agencies that have operating locations in Miami-Dade County are considered local resources, and are assigned responsibilities under the County CEMP.

3.6.8 Federal Government

3.6.8.1 Roles & Responsibilities

The Federal Emergency Management Agency (FEMA) is the agency responsible for coordinating the resources and personnel of the federal government involved in assisting local governments in disaster response activities.

FEMA administers a variety of programs that support state and local governments in their efforts to improve emergency preparedness, mitigation, response, and recovery capabilities. The federal government does not interface directly with the County or any of its municipalities. The role of liaison is performed by the State of Florida to the County, and the County will perform as liaison between the State and municipalities.

3.6.8.2 Federal Assistance

If a disaster is of such magnitude and severity that the capabilities within the city, county and State are exhausted, the Governor will request Federal assistance through FEMA to the President of the United States. The State Emergency Response Team (SERT) advises FEMA Region IV that a formal request for federal assistance has been submitted. Once authorized by the President, the Federal government provides assistance through the NRF. FEMA deploys a FEMA Liaison to the State EOC (SEOC). If a presidential declaration is imminent, an Emergency Response Team (ERT) is deployed. SERT members coordinate directly with counterpart federal ESF representatives and federal ERT members who are assigned to the SEOC.

3.6.8.3 Federal Agencies

Some federal agencies provide assistance to Miami-Dade County and its municipalities in response to an incident or event. During an activation of the county EOC, certain federal agencies are present depending on the type of event, such as the Federal Bureau of Investigation (FBI) or FEMA.

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4 CEMP Roles and Responsibilities

This CEMP is based on the principle that, while emergencies and disasters have no regard for political boundaries, they always occur at the local government level. Therefore, the City of Miami Beach has the primary responsibility for local emergency preparedness, response, recovery, and mitigation. Each office and department of local government must develop and maintain the internal preparedness, response, and recovery procedures it needs to implement this CEMP, including NIMS, and to ensure internal capabilities to perform office or department functions by participating in training and exercises.

In the City of Miami Beach, preparing, responding, and recovering from an emergency is the responsibility of all City personnel and specific outside agencies and organizations, rather than one single agency or department. The City's Department of Emergency Management is responsible for managing the coordinated efforts of all phases of an incident or disaster. The City's Emergency Management program includes organizations involved in the prevention of, mitigation against, preparedness for, response to, and recovery from disasters or emergencies.

Under the all hazards approach to emergency management, response to all disasters requiring Emergency Operations Center (EOC) activation will be conducted as described in Chapter VI, Concept of Operations, of this CEMP and under the responsibilities designated in this Section.

4.1 General Responsibilities

General responsibilities of the City of Miami Beach include:

- Maintaining an emergency management program that is designed to avoid, reduce and mitigate the effects of hazards through the enforcement of policies, standards and regulations, and that involve all government, private and volunteer organizations which have responsibilities in the comprehensive emergency management system within the City of Miami Beach.
- Maintaining a disaster response/recovery plan, which supports and outlines the laws, authorities and functions of each organization involved in the City's emergency management structure, and that is consistent with the Miami-Dade County CEMP.
- Maintaining sufficient staffing levels to prepare, train, and exercise City staff to meet the needs of emergency prevention/preparedness, response, recovery and mitigation activities.
- Maintaining and operating a dedicated, functional EOC, to encompass the all-hazards operations necessary. Ensure a constant state of readiness and ability to maintain a 24 hour operation of the City's EOC.
- Establishing one or more secondary EOCs to provide continuity of government and control of emergency operations.

- Ensuring effective collaboration of emergency management, homeland security, and public safety communication operations to facilitate increased inter-agency information sharing, proper appropriation of resources, and accurate understanding of all threats confronting the City of Miami Beach.
- Ensuring all departmental emergency plans are in sync with target capabilities outlined within the national standards for emergency management.
- Ensuring that response agencies provide an effective response to disasters/emergencies within the geographical boundaries of the City of Miami Beach.
- Coordinating municipal emergency response and recovery activities with the Miami-Dade County EOC and applicable outside agencies.
- Providing one representative to the Miami-Dade County EOC during actual disasters and exercises. Representatives will represent the City of Miami Beach.
- Ensuring appropriate municipal employees are trained for disaster operations.
- Ensuring adequate alert and warning systems are in place to warn the general public and municipal employees of impending disaster situations.
- Issuing State of Local Emergency and evacuation orders where necessary in localized emergencies.
- Developing evacuation/re-entry and traffic control plans which coincide with overall countywide and regional plans. Control traffic within City limits during evacuation and re-entry.
- Notifying residents and visitors of evacuation zones, evacuation orders and, if necessary, assist residents and visitors who need help in evacuating.
- For isolated, unusual incidents which require the temporary sheltering of displaced persons, providing security and/or law enforcement at these temporary locations within the City of Miami Beach's jurisdiction.
- Controlling re-entry into evacuated areas within the jurisdiction of the City of Miami Beach.
- Planning for and conducting emergency operations to maintain/restore all water and wastewater capabilities within the City of Miami Beach's jurisdiction during disaster/emergencies.
- Assisting Miami-Dade County in determining a supply of potable water.
- Ensuring plans, procedures and training for damage assessments are established so that accurate and timely damage assessment surveys will be conducted after a disaster. Ensuring damage assessment reports are submitted to the Miami-Dade County EOC in a timely manner.
- Planning for and conducting debris removal and disposal operations after a disaster.

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- Ensuring that detailed records are kept for disaster response and recovery operations and expenditure for Federal and State reimbursements.
- Designating appropriate public officials to attend Federal public assistance briefings. Ensuring that all projects undertaken under the Federal assistance program are in accordance with established guidelines. Providing required reports to County, State and Federal representatives.
- Safeguarding of vital records and continuance of government through coordinated continuity of operations planning.
- Through appropriate departments, coordinating necessary demolition or stabilization of structurally damaged public facilities, and coordinating with owners or management of structurally damaged private or nonprofit facilities regarding structural integrity of the damaged structures. Taking appropriate action, including condemnation of damaged structures.
- Working within the structure of the NIMS per Federal mandate.
- Ensuring City agencies work within the established NIMS structure to ensure consistent and efficient management of the incident.

4.1.1 General Preparedness Responsibilities – All City Departments

City of Miami Beach Departments may have emergency related functions in addition to their normal daily functions. Each Department Director is responsible for the development and maintenance of their respective Emergency Management Plan and Procedures for each Division and Section, and performing such functions as may be required to effectively cope with and recover from any disaster affecting their respective areas of responsibility. Specifically, the following common responsibilities are assigned to each department listed in this plan:

- Create an emergency plan for their department.
- Create and maintain a department procedure for employee notification.
- Establish department and individual responsibilities and identify emergency tasks.
    - Work with other City departments to enhance cooperation and coordination, and eliminate redundancy. Departments having shared responsibilities should work to complement each other.
    - Establish education and training programs so that each division, section, and employee will know exactly where, when and how to respond.
    - Develop site specific plans for department facilities as necessary.
    - Ensure that employee job descriptions reflect their emergency duties.
    - Train staff to perform emergency duties/tasks as outlined in the CEMP or individual department plans.
    - Identify, categorize and inventory all available department resources.

- Develop procedures for mobilizing and employing additional resources.
- Ensure communication capabilities with the EOC.
- Fill positions in the emergency organization as requested by the EOC Manager or Emergency Management Coordinator, acting in accordance with this plan.
- Prepare to provide internal logistical support to department operations during the initial emergency response phase.

4.1.2 General Response Responsibilities – All City Departments

The following common responsibilities are assigned to each department listed in this plan.

- Upon receipt of an alert or warning, initiate notification actions to alert employees on assigned response duties.
- As appropriate:
  - Suspend or curtail normal business activities.
  - Recall essential off duty employees.
  - Send noncritical employees home.
  - Secure and evacuate departmental facilities.
- As requested:
  - Augment the EOC's effort to warn the public through use of vehicles equipped with public address systems, sirens, employees going from door to door, etc.
  - Keep the EOC informed of field activities, and maintain a communications link to the EOC.
  - Activate a control center to support and facilitate department response activities, maintain event logs, and report information to the EOC. Report damages and status of critical facilities to the EOC.
  - Send a representative to the EOC, if appropriate or requested.
- During response and recovery phases of an incident, Department Directors may be assigned by EOC Management to serve in an EOC function not otherwise assigned during normal everyday operations.
- Ensure staff members tasked to work in the EOC have the authority to commit resource and set policies.
- Coordinate with the EOC to establish protocols for interfacing with County, State and Federal responders.
- Coordinate with the EOC Public Information Officer before releasing information to the media.
- Submit reports to the EOC detailing departmental emergency expenditures and obligations.

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4.1.3 Department Directors and Managers

Department Directors/Managers will:

- Call back all personnel intended to be used in both their routine and assigned functions, and directing such personnel where to report and their respective assignment.
- Be responsible for the safety of records, files and equipment assigned to their department/divisions.
- Ensure that records are maintained upon the announcement of a Hurricane Watch or following a major disaster. These records are normally comprised of time sheets, supplies and equipment, and include expenses over and above normal operating expenses that are directly related to an incident or when the Hurricane Watch is announced.
- Ensure Activity Logs are initiated as a matter of record upon announcement of a Hurricane Watch or following a major disaster.
- Ensure that each of their facilities and buildings are secure before a disaster strikes.
- Assign a safety coordinator for each division or section of their respective department.

4.1.4 Emergency Support Functions (ESFs)

A department or agency may be designated as the Primary or Lead agency for an ESF for a number of reasons. The agency may have a statutory responsibility to perform that function, or the agency may have developed the necessary expertise to lead the ESF. In some agencies, a portion of the agency's mission is very similar to the mission of the ESF; therefore, the skills to respond in a disaster can be immediately translated from the daily business of that agency. Each agency has the necessary contacts and expertise to coordinate the activities of their function. Responsibilities include:

- Upon activation of the EOC, the lead agencies for the ESFs will designate a representative in the EOC to coordinate that ESF. It is up to the lead agency's discretion as to how many, if any, support agencies they will require present with them. However, due to the limited space available in the EOC, the attendance of support agencies should be closely coordinated with the Division of Emergency Management (DEM) in the development of Standard Operating Procedures (SOPs).
- The Primary department for the ESF will be responsible for obtaining all information relating to ESF activities and requirements caused by the emergency and disaster response.
- The City will respond to local requests for assistance through the ESF process. Within the EOC, requests for assistance will be tasked to the ESFs for completion. The primary agency will be responsible for coordinating the delivery of that assistance.

- The EOC Supervisor will issue mission assignments to the lead departments for each ESF based on the identified resource shortfall. Resource tasking will be accomplished through the ESFs on a mission assignment basis. The tasking on a mission assignment basis means that a local government resource shortfall will be addressed through assigning a mission to address the shortfall, rather than tasking specific pieces of equipment or personnel.
- The primary department or agency for that ESF will be responsible for identifying the particular resource or resources that will accomplish the mission and coordinate the delivery of that resource to the requesting entity.
- All ESF representatives are required to work within the structure of NIMS to ensure consistent and efficient management of the incident.

Specific roles, responsibilities, and assignments for each of the City's 18 Emergency Support Functions can be found the associated annex.

5 Response Actions

5.1 Notification and Warning

Different response actions are required for different threats. The level and type of response can vary according to the ability to properly notify and warn the community. Warning for an emergency requires action on two levels: warning officials and organizations and warning the general public. The Emergency Manager will determine the extent and method of warnings. The scope of a warning can range from Citywide for an event like a hurricane, to a limited area of the City for a hazardous materials incident.

5.1.1 Alert & Notification

When possible, agencies in the EOC structure will be notified in advance to allow for incident specific response planning. DEM will also alert, and work closely with, subject matter experts based on the type of hazard and its anticipated impact.

Miami Beach Public Safety Communications Division (PSCD) will be forward information on incidents that meet certain criteria to the County Duty Officer and State Watch Office.

When severe weather is forecasted to impact the area, the National Weather Service (NWS) will provide forecast briefings. DEM monitors these briefings and will notify city stakeholders when weather advisories are issued. If a weather event, or damage from a weather event, is reported to DEM via the city's Answer Center, the Local Warning Point, or some other source, DEM will contact the County OEM Duty Officer to provide that information.

Emergency Alerts are sent to the public only in the event of an emergency that requires protective action(s). When an emergency protective action is issued in response to an incident or event, Miami Beach Public Information Officers would disseminate messages through MBAlert and via social media, i.e., Facebook & Twitter. When an emergency

notification to a specific geographic area(s) is required, the MBAlert system can be utilized.

5.1.2 DEM

The designated on-call DEM staff serves as the DEM primary emergency point-of-contact for the alert, notification, and initiation of a preliminary response to major emergencies and disaster events occurring in Miami Beach. The designated personnel can be notified 24-hours/day, regardless of the activation status of the Miami Beach EOC.

They will monitor NWS forecast updates. If weather conditions begin to deteriorate, they will contact the NWS Lead Forecaster for additional information and provide updates to DEM staff and city stakeholders.

If an activation of the EOC is ordered, the Emergency Manager or designee will have primary responsibility to initiate appropriate notifications to EOC Section Chiefs and Branch Directors. These notifications will include EOC activation level; brief incident summary; EOC operational period; and agencies to be notified.

5.1.3 Local Warning Point

The primary 24-hour Miami Beach Warning Point is located at the Miami Beach Police Headquarters Fire Public Safety Communications Center at 1100 Washington Ave., Miami Beach, Florida. Emergency 911 operators receive emergency notifications 24-hours a day through traditional land line telephone communication. Dedicated equipment known as the "Statewide Emergency Satellite Communications Network" (E-SATCOM) is located at the Fire Alarm Office to receive notifications from the State Warning Point. In addition, a dedicated land line (i.e., "hot ring-down") is available for exclusive use for events concerning the Turkey Point Nuclear Power Plant.

5.1.3.1 Warning and Status Updates

DEM provides notifications of an event as early as is practical in an effort to provide as much advance warning as possible. Notification, warning, and event updates are accomplished in a number of ways depending on the circumstances surrounding the incident. In the case of a tropical cyclone, the DEM staff begins the notification process three to five days prior to the anticipated arrival of the storm. Events for which no warning is possible are handled in the most expeditious manner, either by radio, telephone, or fax.

DEM, in cooperation with the Human Resources Department, maintains a comprehensive emergency contact database containing names, affiliations, office telephone numbers, home telephone numbers, emails, fax numbers and 24-hour contact numbers. This database is maintained and updated on a continuous basis.

The City of Miami Beach utilizes an emergency notification system, which has the capability of simultaneously calling, texting, and emailing notifications and updates to partner agencies, municipalities, organizations and residents. The typical broadcast notification via email, phone or text messaging for a storm event includes a map of the storm forecast positions, a tentative time schedule for the storm, and a schedule of

anticipated actions to be taken by Miami-Dade County assuming a “worst case scenario”. The DEM website is also routinely updated to provide the latest information in order to notify and warn the public.

DEM has created a program to simplify the notification process to all City Department Directors and employees through the Department Personnel Representative (DPR). DEM advises the DPR via e-mail of the incident or the disaster and they in turn are responsible for forwarding this information to their Department Director and employees. In an effort to keep the county informed of all emergency actions, DEM includes the County EOC in all of its emergency notifications.

Once the EOC is fully activated, each agency representative is provided with an unpublished telephone line within the EOC that can be utilized to communicate with other agencies. All EOC representatives are provided with updated status information on a timely basis. Notification and status updates are provided to the general public through the electronic and print media. Public Information Officers (PIOs) from the City’s Office of Marketing and Communications are assigned to the EOC during any activation. The PIO ensures that the media correctly informs the public regarding the circumstances surrounding an incident or disaster by monitoring radio and television broadcasts, scheduling press conferences, and issuing news releases. The PIO utilizes the media for the purpose of notifying the people of Miami Beach of any potential emergency. In the event that immediate dissemination of information to the public becomes necessary, the County EOC has the capability of using the EAS to alert the general population by radio and television.

5.1.4 Special Populations

The hearing impaired receives emergency public information through open/closed captioning provided by the local television stations. The Florida Relay Service provides updated emergency information for dissemination to their clients. Emergency Public Information is provided in English, Spanish, and Haitian Creole through television and radio stations.

5.1.5 Other Notification Procedures

- Using established marine frequencies, marine-specific information and warnings are disseminated by the U.S. Coast Guard.
- Under certain circumstances, Code Compliance Officers may be dispatched to businesses to notify and visitors of a potential threat.
- Many residents, businesses, organizations, schools, and municipal governments also obtain notifications and warnings through NOAA weather radios.

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5.2 EVACUATION AND SHELTERING

5.2.1 EVACUATION

Evacuation estimate figures are feasible for hurricane and Turkey Point evacuations but, all other evacuations for other types of disasters are extremely variable. Estimates of population, pre-designated evacuation routes and clearance times for affected areas of Miami-Dade County for pre-determined evacuation areas are presented in the All Hazards Protective Measures Plan located in Volume III of the CEMP.

5.2.1.1 RESIDENTIAL HEALTH CARE FACILITIES (RHCFS)

Miami Beach DEM in conjunction with Miami-Dade County OEM coordinates the evacuation of stretcher-bound patients in order to maximize the use of ambulances. Each year, hospitals and nursing homes are required to submit their census to help OEM in the preplanning of resources. The census information includes licensed bed capacity and average facility capacity.

These numbers help OEM in allocating an adequate amount of vehicles and in estimation of evacuation start times. The census information is supplemented by polling of impacted or potentially impacted facilities at the time of an incident by MDC OEM ESF 8 lead and support agencies. The supplemental information obtained includes the amount of critical, serious, and stable patients.

Normally, the number of patients requiring evacuation by ambulance exceeds the capability of Miami-Dade's available local inventory of ambulances. In order to transport these patients safely within the clearance time available, it is sometimes necessary to request ambulances from other areas. For planning purposes, it is currently estimated that 36 - 48 hours is required to secure additional ambulances and use them to complete patient evacuation.

All Residential Health Care Facilities (RHCF) are required by State Statute to submit for approval their CEMP to MDC OEM. All RHCFs must demonstrate adequate evacuation plans that include transportation and receiving facility agreements in their CEMP.

5.2.1.2 NATIONAL DISASTER MEDICAL SYSTEM

In the event that evacuation of the health care facilities exceeds local and regional resources the MDC EOC will request Federal assistance through the National Disaster Medical System (NDMS). The NDMS is a federally coordinated system that augments the Nation's medical response capability. The overall purpose of the NDMS is to supplement an integrated National medical response capability for assisting State and local authorities in dealing with the medical impacts of major incidents. Principally, the NDMS may be activated to support patient reception and disposition of patients to hospitals when an evacuation is ordered. The NDMS is coordinated locally by the Miami Veterans Affairs Healthcare System. In the event that the NDMS is needed to support evacuations the MDC EOC Incident Commander will requests its activation through MDC ESF 8.

5.2.1.3 SCHOOLS

Miami-Dade OEM maintains an agreement with Miami-Dade County Public Schools (MDCPS) that indicates the process for closing of schools prior to an incident or disaster. This agreement also indicates the use of certain schools as Medical Evacuation Centers (MECs), Evacuation Centers (ECs), and Pet Friendly Evacuation Centers. When considering the use of these facilities, the Superintendent of Schools participates in the development of the evacuation schedule and approves closure times for all schools prior to the issuance of an evacuation order. In developing the evacuation schedule the following must be considered:

1. The normal A.M. bus schedule,
2. Time required to evacuate the schools and to transport the students' home,
3. Time required to staff and prepare the facility for use as an EC.

5.2.1.4 BUSINESSES

Consideration is given to designating a specific time for businesses within an evacuation zone to close and evacuate personnel. This time is usually subsequent to the issuance of a general evacuation order but prior to the advent of tropical storm force winds. Miami Beach will refrain from issuing an evacuation order for businesses until absolutely necessary in an effort to maximize the available resources to the general public prior to the incident or disaster.

Miami Beach Code Compliance officers will advise business owners of evacuation orders issued. Code Compliance Officers will also advise outdoor establishments to take down temporary structures, umbrellas and other loose material in the event of a Hurricane Watch, if there is a strong likelihood of a Hurricane Watch, or in the event that other severe weather is forecasted.

5.2.1.5 AUTHORITY

The Miami-Dade County Mayor is responsible for declaring a State of Local Emergency and issuing evacuation orders for the affected locations within the County. Prior to official notice, these actions will be considered by the Miami-Dade County Policy Group based on recommendations from the Miami-Dade County Mayor.

The City of Miami Beach's Policy Group is likewise responsible for declaring a Local State of Emergency and issuing evacuation orders for the City of Miami Beach. These actions will be considered by the Policy Group based on recommendations from the Emergency Manager or his/her representative.

The City EOC will be the central direction and control facility for City of Miami Beach disaster response operations. Under the direction of the City Manager and Emergency Manager, the City EOC Organization will coordinate all aspects of response activities. The City EOC Organization consists of representatives from all City departments, along with various other

agencies. Coordination between departments and agencies will be conducted within the City EOC.

5.2.1.6 Localized Evacuation

The principle of graduated response applies to actions taken if a localized disaster causes evacuations from threatened areas. Any evacuation during a localized disaster will be dictated by the situation and by the decision of the IC based upon the threat to the areas adjacent to the disaster site. The decision and order to evacuate will be made within the City of Miami Beach by the Mayor.

During localized evacuation situations, requests for outside assistance will be made through the City of Miami Beach EOC. This assistance may include, but is not limited to, the opening of selected shelters, emergency transportation, and activation of search and rescue units, and requests for specialized personnel or equipment. All outside assistance will be coordinated through the City EOC.

5.2.1.7 Large Scale Evacuation

The City of Miami Beach will follow the guidelines of Miami-Dade County Emergency Management during a large scale evacuation. When, in the judgment of the Miami-Dade County Mayor, or his/her representative, an approaching hurricane or other emergency presents a threat to Miami-Dade County, the Miami-Dade County Policy Group will be convened. If deemed appropriate, the Miami-Dade County Policy Group will issue a Declaration of a State of Local Emergency. The Miami-Dade County Policy Group may issue an Evacuation Order concurrently with this Declaration or may defer the Evacuation Order to a later time.

If necessary during an impending disaster, the Miami-Dade County School Board, or if designated by the Board, the Superintendent of Schools, will order the closing of public schools. Public schools will be closed based on consultation with the Miami-Dade County Administrator.

Responsibility for closing of businesses during actual or impending disasters rests with individual business management. However, businesses located within an area ordered to be evacuated by the Mayor, or an Incident Commander for a localized disaster, must be evacuated.

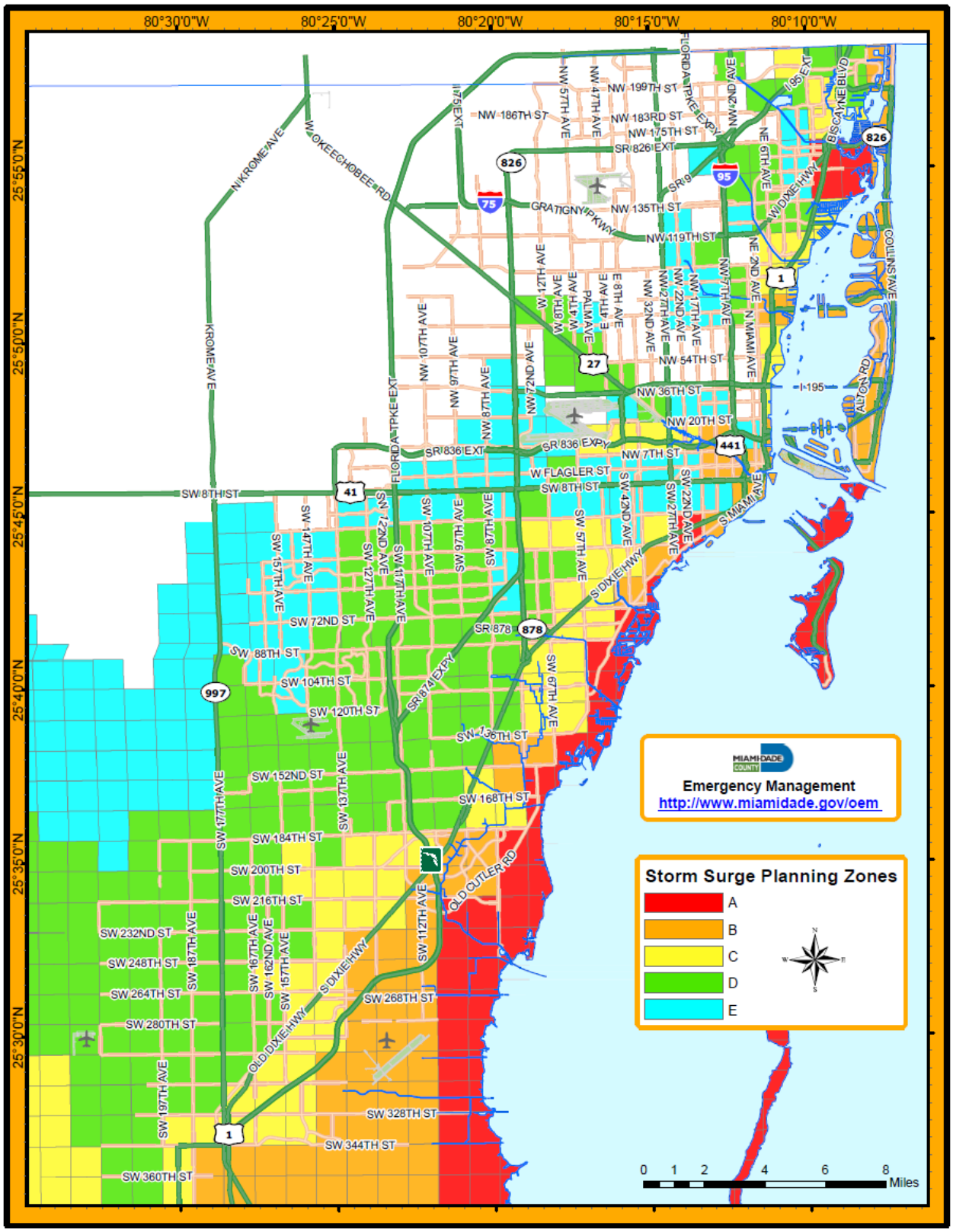
5.2.1.8 Evacuation Routes

Evacuation routes are coordinated between Miami-Dade County and the Florida Department of Transportation (FDOT). The main evacuation routes are the major highways in the County. The City of Miami Beach will assist the County in manning evacuation routes as requested. Individuals evacuating out of the area will use the designated routes as their primary means of egress. Individuals evacuating to shelters will use the most direct route from their area to their shelters. To ease traffic congestion, residents in lower-lying areas will be advised through the media to consider leaving as early as possible before a

mandatory evacuation order begins. See Figure 10, Miami-Dade County Evacuation Routes on the following page.

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Figure 7: Miami-Dade County Storm Surge Planning Zones and Evacuation Routes



5.2.1.9 TRAFFIC CONTROL

To maintain a continuous flow of traffic, both internally and on the evacuation routes leading out of the City, the City of Miami Beach Police Department and the City Transportation Department have established a traffic control plan. Traffic Control Points are designated at critical intersections through the City of Miami Beach. The Miami Beach Police Department is assigned to provide the necessary personnel at each Traffic Control Point. Locations of Traffic Control Points are maintained by the Miami Beach Police Department.

City, County and State law enforcement personnel will provide security along traffic routes. City and County law enforcement will also coordinate emergency vehicles for evacuation routes to assist evacuees with vehicle problems or, if necessary, to move them to a safe area.

In the event of closure of any evacuation route, law enforcement personnel will redirect traffic to alternate routes as appropriate. Intersections or points along evacuation routes that may flood will be identified and plans made for the re-routing of traffic.

5.2.1.10 EMERGENCY TRANSPORTATION

Evacuees who require transportation assistance may use public transportation provided by a public transit system. Public transportation will assist evacuees who cannot drive and have no other means of transportation. All evacuees using emergency bus service will be taken to designated shelters. Buses will also be made available to return to the evacuated areas after the emergency or disaster has passed. Miami-Dade Department of Transportation and Public Works (DTPW) operates public transportation buses to pre-designated evacuation pick up points.

Evacuation of vulnerable populations will be initially provided by the Miami-Dade County, but Miami Beach Fire EMS Division will work with Miami Beach Office of Housing and Community Services to identify, locate and assist members of the community who require special assistance in emergencies. Transportation and medical requirements will be considered in establishing procedures to move these citizens to places of safety. Citizens who require medical attention while living at home will be moved to special needs shelters or to the home of a relative or friend by prior arrangement by the individuals concerned. The Emergency and Evacuation Assistance Program (EEAP) is the County's system to identify those in need. Miami Beach personnel will make every effort to support and enhance this service to ensure that vulnerable populations are protected in the event of disaster.

5.2.1.11 RE-ENTRY

The City Manager is vested with the authority to allow re-entry to evacuated areas and to declare a termination of a declaration of emergency. In all likelihood, reentry will be a gradual process depending on the extent of damage in various areas of the City.

In all damaged areas, re-entry will not be allowed until the area has been deemed safe by the Policy Group through the authorization of the City Manager. In those damaged areas, the Policy Group will make recommendations to the City Manager on when the areas are

safe as determined by the City. Official information about re-entry will be disseminated to the public through the City PIO. Once the official message is released, it will further be disseminated through the Answer Center (RIC), Elected Officials and local media.

The Policy Group is tasked with the responsibility of planning, coordinating, and directing Miami Beach's re-entry and security operations of the affected area(s).

5.2.2 SHELTERING

Miami Beach is located entirely in an evacuation zone, and therefore has no approved evacuation shelters within City limits. Miami-Dade OEM will communicate the availability and location of open evacuation centers. Facilities can be selected for a variety of evacuation circumstances. For hurricanes, facilities must meet structural criteria to withstand the high winds. Facilities must also be located outside of areas where storm surge and flooding may occur.

5.2.2.1 EVACUATION CENTERS

Evacuation Centers provide a refuge of last resort for those individuals who need to evacuate and are unable to make their own evacuation and sheltering arrangements outside of evacuation zones. Miami-Dade County opens and operates a variety of Evacuation Centers at pre-identified locations for a variety of evacuation circumstances. It is important to note that the City of Opa-locka may be asked to provide Evacuation Center support to those ECs opened within the jurisdiction.

- Types of Evacuation Centers includes:
- General Population Evacuation Shelters
- Pet-Friendly Evacuation Centers
- Medical Evacuation Centers
- Medical Management Facilities
- Post-Disaster Shelters

5.2.2.2 PET FRIENDLY EVACUATION CENTERS

Miami-Dade County with its Disaster Assistance Employees (DAE) oversees the human population at the evacuation center while Miami-Dade's Animal Services Department manages the pet designated area. Refer to the PFEC Operations Guide in Volume III of the Miami-Dade County CEMP. When evacuations are announced, the County will also announce which available evacuation shelters will accept pets. Various types of animals are allowed, but there are certain limits and restrictions. Pet owners must bring proper ID and proof of pet vaccinations. More complete and recent information is available on the Miami-Dade County web site,

5.2.2.3 EMERGENCY AND EVACUATION ASSISTANCE PROGRAM (EEAP)

Miami-Dade OEM maintains a registry for people who may need special assistance in case of an emergency evacuation. Eligible individuals are those who:

- are unable to evacuate on their own to a specialized transportation need,
- are homebound residents and unable to walk to a bus pickup point and do not have anyone that can provide transportation,
- have medical needs that prevent them for evacuating on their own,
- are bedbound patients,
- are on –life-sustaining medical equipment that require electricity, and/or
- require assistance with daily living activities

The services available to EEAP clients are generally all hazards oriented. Special arrangements are made to address countywide emergencies such as evacuations for hurricanes and nuclear power plant emergencies.

The sheltering program consists of Evacuation Centers (ECs), Medical Evacuation Centers (MECs) and Medical Management Facilities (MMFs). Only those people that are dependent on life sustaining medical equipment, bed-confined, or in critical condition are assigned to an MMF. All others are assigned to an EC or MEC. Staffing for MECs is obtained from Florida Department of Health in Miami-Dade County (DOH Miami-Dade), Jackson Memorial Hospital (JMH) and county employees from the Disaster Assistance Employee (DAE) program.

Transportation services are provided to people who indicate a need on their application. A door-to-door service picks clients up at their home and brings them back to their home once the emergency is over. Specialized transportation for wheelchairs is also available. People requiring ambulance transportation are carefully screened. Contracted private ambulances provide transportation services with support from local and municipal fire departments, as necessary.

The evacuation and assistance of individuals on the registry is conducted based upon the impending or actual event. The procedures for the registry, evacuation, transportation and sheltering programs are detailed in the Miami-Dade EEAP Operations Guide. Information about activation of services for the EEAP may be found in the Evacuation Support Unit Operations Guide located in Volume III of the CEMP.

5.3 IMPACT ASSESSMENT

Impact assessments include the physical, human needs, environmental and economic impacts to the community. The Impact assessment supports informed decision making before, during and after an event. This process begins with the potential impact for known threats and continues through the actual impact of a hazard event. While the community is preparing for or being impacted by an event and the EOC is activated, the Planning and

Operations Sections will gather real time information on the impacts of the event, including the projected numbers of people and critical infrastructure within areas of impact. For weather related events, information about winds, rainfall, and current status of flooding and canal levels will be gathered. For tropical storms and hurricanes information on projected wind speeds, wind field breadth, rainfall, and storm surge will also be gathered.

After an event, assessments will typically be accomplished starting with widespread, aerial and windshield assessments and broad scale issues such as overall impact of damages and debris. Shortly later, assessments will become more refined and detailed, including door to door assessments interviewing individuals about their needs and structural assessments to determine the safety and habitability of individual structures. Initial assessment information will guide response decisions and determine potential qualification for a Presidential Disaster Declaration.

5.3.1 Initial Damage Assessment (IDA)

The IDA will provide a quick report on affected areas and magnitude of impacts. IDA information will come from a wide range of agencies and from the community at large. It will assist in determining the areas that have greater impacts and allow the EOC to prioritize the assignment of preliminary damage and detailed assessment teams, if needed. In the immediate aftermath of the disaster, the City will conduct a citywide IDA. The Emergency Manager, or designee, is responsible for coordinating the IDA. The goal of this assessment is to determine the magnitude and severity of damage to structures and infrastructure and to identify the areas and populations most in need. Information collected by local damage assessment teams should include photographs and supporting documentation that can be used by the County and State to verify damage to homes and businesses in order to determine costs and eligibility for Public Assistance (PA) related projects.

The City is also responsible for reporting operational information, reports from the public, and observed damage to the Miami Dade County EOC as part of their broader countywide IDA.

5.3.2 Preliminary Damage Assessment (PDA)

The PDA is a joint assessment used to determine the magnitude and impact of an event's damage and to support the Governor’s request to the President for federal assistance. A team comprised of FEMA, the State and Small Business Administration will usually visit local applicants and view their damage first-hand to assess the scope of damage and estimate repair costs. The PDA also identifies any unmet needs that may require immediate attention. This information will assist in the planning for additional resources such as shelters, temporary housing, and disaster recovery centers. Normally, the PDA is completed prior to the submission of the Governor’s request. However, when an obviously severe or catastrophic event occurs, the Governor’s request may be submitted prior to the PDA.

5.4 Foreign Nationals

Pursuant to the Vienna Convention on Consular Relations, there is a protocol to be followed when a foreign national is involved in a disaster. Specifically, Article 37, Information in cases of deaths, guardianship or trusteeship, wrecks and air accidents, requires that the appropriate consulate be notified as soon as there is knowledge that one of their citizens is deceased, incapacitated or if there is an accident involving a foreign ship or aircraft registered to that country. Following this protocol, Miami Beach will work with Miami Dade County and the Regional Director of the U.S. Department of State/Office of Foreign Missions in order to provide the appropriate consulate with information pertaining to their citizen's involvement in a local disaster.

5.5 Mutual Aid

The response to and recovery from a declared incident or disaster may require the utilization of resources over and above those held by the City of Miami Beach. In order to access additional resources that may be required, it is necessary to enter into agreements with other cities and their attendant agencies. These agreements accomplish three primary goals:

1. Identify the resource(s) to be accessed;
2. Provide reasonable assurance that those resources will be made available when required; and
3. Provide terms for compensation for the use of those resources.

Emergency utilization of the resources and capabilities of organizations and agencies that are not part of Miami Beach city government is pre-arranged through mutual aid agreements and memorandums of understanding to the maximum extent possible. Such agreements are entered into by duly authorized city officials and are formulated in writing. Agreements include a clear statement regarding payment or reimbursement for personnel services, equipment costs, and the return of materials. All mutual aid agreements conform to and are part of the state mutual aid program.

Miami Beach is a participating municipality in the statewide mutual aid program and understands that any requests for mutual aid must be submitted through the Miami-Dade EOC.

5.6 Facility Life Support Systems

Back-up electrical power is provided to the Miami Beach EOC through several sources. Two independent power feeds exist from two different power sub-stations. The facility is equipped with two 2.2-megawatt back-up generators cooled with well water from adjacent wells. Three 12,000-gallon fuel tanks are capable of supplying fuel for 30 days. All back-up generators are checked under load twice a month.

The EOC is equipped with a full back-up battery through uninterrupted power system (UPS) which is capable of maintaining power for a full 30 minutes. Two 300-ton chiller units and an

off peak 140-ton chiller are capable of maintaining the temperature within the EOC. Any of the three are capable of maintaining the inside air temperature to less than 80º Fahrenheit.

6 RECOVERY ACTIONS

The recovery phase of an emergency or disaster deals with the functional restoration of a community to the conditions prior to the disaster event. The recovery phase includes but is not limited to the following:

- The restoration of infrastructure including roads, traffic controls, signs, canals, railroads, airports, shipping facilities, fuel supplies, potable water supplies, electricity, sewage disposal, storm drains, and flood control facilities.
- The restoration of public safety measures including fire suppression, law enforcement, and search and rescue.
- The restoration of human services including the provision of health and medical services, environmental and public health concerns, and the provision of services to people, including those with special needs.

The City of Miami Beach DEM, through its Infrastructure Branch Director is responsible for the coordination of short-term recovery efforts within the City of Miami Beach. Before the establishment of a Joint Field Office (JFO) recovery activities are coordinated through the EOC. Recovery activities include preliminary damage assessment, coordinated debris strategy and debris clearance, as well as the coordination of business recovery actions.

In the event of an emergency that is followed by a major disaster declaration (as described in 44 CFR), requiring the establishment of a JFO, the DEM, through the Infrastructure Branch Director becomes the liaison between the City of Miami Beach and Miami-Dade County, along with State and Federal representatives assigned to the DFO. This is also true relative to the implementation of Disaster Recovery Centers (DRCs), and Preliminary Damage Assessment Teams, staging areas, and other sites.

In the event of an emergency that is not followed by a disaster declaration, DEM initially coordinates with the appropriate agencies for assignments, until essential services are restored.

6.1 TRANSITION FROM RESPONSE TO RECOVERY

The transition from response activities to recovery may not be clear. The return to an evacuated area may be an extended period of time due to uninhabitable conditions – caused by flooding or building collapse, or the lack of access or essential services - such as blocked roadways, lack of water, sewer, or electricity.

Agencies responsible for recovery functions must be activated and ready to perform assigned functions before the response phase is finished. There is a marked difference in the action required during the initial or short-term recovery phase, and the extended or long-term recovery phase. The different phases occur simultaneously throughout the

community. Some neighborhoods functioning through the short-term recovery phase, due to a lack of essential services. Simultaneously, other neighborhoods may address long-term recovery projects, such as road rebuilding and repair.

6.2 Disaster Assistance Centers (DACs)

The City of Miami Beach DEM has established sites that are strategically located throughout the City and will serve as DACs. A DAC is a “one stop” center located in the disaster affected areas and is designed to provide information and referrals regarding the types of disaster services available. Depending on the magnitude of the disaster, they may also include the provision of other disaster related services or resources such as the distribution of food and water, comfort items, emergency medical and mental health services, and family reunification. Resources and agencies assigned to a DAC will vary depending on the severity and magnitude of the disaster. If a presidential declaration is issued, DACs will deactivate once State and Federal personnel arrive and open DRCs. If a presidential declaration is not issued, a DAC will remain open until the immediate needs of the community have been met or volunteer agencies can handle the decreasing workload at their respective facilities.

If the disaster is of a catastrophic nature, causes widespread damage throughout several segments of Miami-Dade County, and the need for the establishment of a DRC is determined, the request for assistance from State and Federal partners will be routed through the Logistics Section. Whenever possible, DAC locations will be converted to DRCs upon the arrival of FEMA and FDEM personnel and may be augmented by other local agencies or social service providers. In the event that existing locations are not suitable, additional sites such as parks or community centers will be identified.

The process of awarding individual assistance is overseen at the DACs and DRCs. All current contact information of agencies offering recovery services will be provided for public dissemination.

The DAC coordinator acts as liaison with the Human Services Branch Director at the EOC on all matters related to the operation of DACs/DRCs. These responsibilities include, obtaining procedures on how DAC/DRC personnel will be contacted for work assignments and locations and an inventory of items to include, data, equipment and vehicles required to operate the DAC/DRC. There should also be coordination with the FEMA JFO. Local agencies that may provide information and referral in the DAC/DRC may include the American Red Cross and other community service agencies.

6.3 Family Reunification Center (FRC)/Family Assistance Center (FAC)

A Family Reunification Center may be set up immediately after an incident. The FRC is the designated place used to reunify victims and their family members immediately after an incident or for family members of victims who were killed or injured to seek information and services. Family Assistance Center is the place for victims and family members to get information and services once the reunification center is no longer being utilized.

6.4 Mass Care

The DEM maintains a list of approved shelter sites that meet the criterion outlined in ARC 4496, which states the methods to be used in selecting sites for congregate care facilities. Compliance to this standard is confirmed by the use of ARC Mass Care Facility Survey Form. Miami-Dade County EM is responsible for the evacuation of persons with special needs.

6.5 Infrastructure

The City's infrastructure includes roads, bridges, traffic controls, water and sewer systems, storm drains, street lights, medical services, electrical and telephone services, food supplies, garbage and debris pick up and disposal. The short-term recovery phase begins with the restoration of these services. Full documentation of recovery efforts must be maintained especially in the event of an emergency or disaster declaration when FEMA will require such documentation to be attached to the Project Worksheets.

6.6 Debris Removal

The process of debris removal and clearance of critical transportation infrastructure is a cooperative effort between the City of Miami Beach Sanitation Division, Parks & Recreation Department, Public Works Department and the FDOT.

Staging, sorting, and disposal sites have been identified throughout the City. The City of Miami Beach Finance department is responsible for the collection and maintenance of debris financial records with the exception of load tickets. These are maintained by City of Miami Beach Sanitation Division, who is the lead for debris removal. In the event of a major disaster, FEMA may make debris clearance a mission assignment to another agency such as the U.S. Army Corps of Engineers.

6.7 Insurance Coordination

Risk Management maintains the procedures and policies for insurance coordination and implementation. Risk Management is activated by notification of the Emergency Manager or designee in response to the issuance of the disaster declaration.

6.8 Staffing

The emergency support staff utilized for preparing correspondence and maintaining files during the short-term recovery phase of an incident or disaster is assigned from a pool of maintenance and clerical staff. In the event that additional staff is required, temporary employment procurement contracts may be utilized for the purpose of providing suitable temporary staff.

6.9 Short-Term Recovery Phase

The short-term recovery phase immediately follows the disaster event and entails the immediate, even if temporary, efforts to allow a return to normal life. The community may

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still be under emergency conditions if essential services have not been restored. Conditions for extending the emergency period during the short-term recovery phase include:

- Residents are still in shelters.
- Water or sewer systems are inoperative.
- Electricity is not available.
- There is a shortage of food, water, and other basic goods.
- A curfew is in effect.
- Re-entry is not possible because of debris or severe damage.

The recovery process begins with an initial damage assessment conducted by City of Miami Beach personnel using aircraft, ground vehicles, observer call-ins and the Snapshot Program noted below. The size and type of the incident and its overall impact on the community will determine who should participate in the damage assessment process. Minor emergencies or incidents may only require participation of local City agencies and organizations. Major disasters or emergencies may involve Miami-Dade County, as well as State and Federal representatives in the damage assessment process.

Oversight of short-term recovery falls within the responsibilities of the Operations Chief through the Branch Directors. The use of inspectors from the City of Miami Beach Office of Building Code Compliance, the Building Department and Miami Beach SAR personnel are utilized for structural evaluation during the re-entry process.

During the short-term recovery phase, an accurate and complete economic assessment is highly unlikely, as the total extent of damage will not be immediately available. Initial estimates of damage from canvassing the affected areas and estimating the costs of repair based on past experience. The initial damage assessment determines if an emergency declaration is warranted.

6.10 Long-Term Recovery Phase

Long-term recovery is defined as the point at which repairs are permanent rather than temporary. After the basic essentials are restored and victims have returned to their homes or other permanent housing, the neighborhood must rebuild the infrastructure and economy to at least a pre-event level. Activities include: demolition of dangerously damaged structures, debris removal, repair or reconstruction of water and sewer systems, roads, bridges and other public facilities, as well as the repair or reconstruction of private property.

The first step in the long-term recovery process following a declared emergency or disaster is to schedule an applicant's briefing, a meeting conducted by a representative of the State for all potential applicants for public assistance grants. At the applicant's briefing all parties are informed of the eligibility requirements, application procedures, administrative requirements, funding and program eligibility criteria to receive Federal and

State assistance. The State DEM will undertake to notify as many potential applicants as possible including advertising the applicant briefing in local newspapers. Potential applicants include City of Miami Beach, State and County departments, and certain private not-for-profit organizations. All applicants who believe they may be eligible will be asked to prepare a Request for Public Assistance (FEMA Form 90-49).

Following the applicant's briefing, the City of Miami Beach Finance Department assumes the primary responsibility for coordinating the City activities required by the Public Assistance Program. This includes administration and oversight of the City's access to the FEMA grants portal, completion and submittal of Project Worksheets and overall grants management.

The FEMA Liaison Officer at the FEMA Coordinating Office is responsible for the implementation of the public assistance process and oversees all administrative procedures. All contract and work-in-progress monitoring of public assistance recovery projects is the responsibility of the City of Miami Beach.

The State of Florida and/or FEMA then issues a determination as to whether an applicant is, in fact, eligible to receive public assistance funding. A Kickoff Meeting is then scheduled and conducted by the Public Assistance Coordination (PAC) Crew Leader. The meeting is designed to provide a much more detailed review of the Public Assistance Program and the applicant's needs. The meeting is the first step in establishing a partnership among FEMA, the State, and the applicant and is designed to focus on the specific needs of that applicant. The meeting focuses on the eligibility and documentation requirements that are most pertinent to an applicant. The FEMA Kick Off meeting will be held at a determined location and will be attended by a representative from Miami-Dade County, State of Florida, FEMA, DEM and the applicant (in the case of certain private not-for-profit organizations). Potential applicants are responsible for identifying possible infrastructure recovery projects and participating in the public assistance process.

Each applicant deemed eligible prepares a Project Worksheet or PW (FEMA form 90-91) for each damaged facility. The PW consists of a scope of work necessary to return the facility to its pre-disaster condition and, an estimate of the cost to do so (see 44 CFR 206). Each PW submitted is then validated by a representative from FEMA and/or from the State.

6.11 Disaster Declaration

If the governor determines the State requires Federal assistance in dealing with an incident or disaster, a formal Request for Public Assistance is submitted by the Governor to FEMA. FEMA, in cooperation with the State, Miami-Dade County and the City of Miami Beach, will perform a Preliminary Damage Assessment or PDA. The FEMA inspectors meet with an DEM representative who is responsible for coordinating the City's PDA participation, and obtain:

- A list of the communities to be inspected;

- The names and addresses of all local contacts;
- A population count;
- A list of damaged facilities with their locations and cost estimates;
- The annual budget, after debt service, for the City of Miami Beach;
- Maps which may be used to show damaged sites; and
- Vehicles, tools and other items necessary to carry out the PDA.

The Federal, State, County and City teams jointly verify the extent of damages attributable to the disaster and submit estimates thereof to the FEMA Regional Director. The recommendations are then submitted to the FEMA National Director in Washington, D.C., who in turn prepares a recommendation to the President of the United States. At such time, the president may issue a Disaster Declaration.

Appropriate City of Miami Beach and Miami-Dade County officials are responsible for providing the State with an assessment of their capability to effectively handle the recovery effort. This assessment includes, where possible, how the damages are to be repaired; where possible, a projected schedule for completion and a recommendation as to the source of funding for the City's share of the recovery costs. Habitability life-safety issues are determined by qualified structural engineers from City and County staff.

During a large-scale disaster, the short-term recovery, and some of the long-term recovery activities are coordinated from a FEMA DFO. Local, County, State and Federal officials operate from this facility until all required recovery projects are addressed. Basic staffing is planned in accordance with the guidelines provided in the NRF.

6.12 Types of State or Federal Assistance

6.12.1 Individual Assistance (IA)

IA is assistance to private citizens who sustained damage from the disaster event and are uninsured or have insufficient insurance to cover their losses. This program is administered by the Small Business Administration (SBA) or through the FEMA Individuals and Households Program (IHP).

Additionally, there is assistance available for those individuals who have been unemployed because of the disaster. Businesses that have been impacted by the disaster may be eligible for recovery loans from the SBA. An SBA declaration helps any eligible business regardless of the size of that business.

6.12.2 Public Assistance (PA)

PA is disaster assistance provided to public entities including State, County and municipal governments, Indian tribes and certain private nonprofit organizations that provide an essential governmental type service.

6.12.3 Mitigation Actions

Hazard mitigation under Sections 404 and 406 of the Stafford Act is any action taken to reduce or eliminate the long-term risk to human life and property from natural or man-made hazards. While the City of Miami Beach is performing repair or restorative work, it should consider mitigation methods that will prevent similar damage in a future event thereby reducing future damage costs.

Hazard Mitigation is pursued on a project-by-project basis. A positive benefit/cost ratio must exist to ensure that the additional work will be cost effective. Mitigation is accomplished by completing additional work that is beyond the scope of normal repairs and beyond code requirements in order to reduce the vulnerability to future disaster related damages.

Mitigation planning is provided through the Miami-Dade County LMS, of which the City of Miami Beach is a co-signee, and carried out by the LMS Working Group that consists of representatives from all phases of the community including County departments, municipalities, public and private schools and universities, non-profit organizations and members of the private sector. The LMS Committee serves as the Disaster Recovery Committee.

The LMS contains a full hazard mitigation plan covering virtually any hazard that might occur in Miami-Dade County. It also includes numerous recommended mitigation projects and a summary of possible funding sources. Refer to the Miami-Dade County LMS for more detailed mitigation information.

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7 ADMINISTRATION

This element of the CEMP addresses general and specific training of CEMP participants and the exercising of plans, procedures and response actions. DEM will make EOC Team Members aware of training opportunities as they arise.

7.1 TRAINING

City of Miami Beach Division of Emergency Management undertakes a constant year-round approach in preparing a prevention, preparedness, response, recovery, and mitigation effort. Aside from developing and maintaining a local CEMP, DEM staff participates in numerous training sessions dealing with an all-hazard approach to include hurricanes, radiological emergencies, hazardous material emergencies, and mass casualty incidents.

7.1.1 ROLES

Training to develop disciplinary preparedness for mission operations is the individual responsibility of all the Department and Office Managers. Miami Beach DEM will conduct annual and other requested in-service training to assist in integration of discipline-specific training with specifics in emergency management. Training includes emergency management exercises and post-event after action report and improvement plans.

The DEM is responsible for performing periodic needs assessments to coordinate the training of all Miami Beach Emergency Management personnel. City agencies that perform roles during emergencies and disasters will also receive adequate training.

DEM is responsible for providing community education to Miami Beach organizations and citizens.

7.1.2 PROGRAMS

Command and General Staff personnel at the EOC level will train with DEM staff at the start of each severe weather season in basic NIMS/ICS principles as well as their basic functions and relationships with other ESFs and EOC operations. At a minimum, all emergency lead and support personnel shall be trained to ICS 100, ICS 200, ICS 700, ICS 800, G300 and G400 levels. The training program shall also include:

- Incident management organizations and personnel participating in realistic exercises, including multidisciplinary and multi-jurisdictional events and private-sector and nongovernmental organization interaction.
- Standard courses on Incident Command and management and the incident management structure.
- Standard courses on operational coordination processes and systems.
- Courses focused on discipline specific subject matter expertise.
- Courses focused on agency specific subject matter expertise.

The training programs currently in place cover those topics that must be understood by all DEM staff and all other personnel of city, county and municipal agencies serving a policy or coordination role in emergencies and disasters.

A list of current State and Federal Programs can be found at: www.floridadisaster.org and www.fema.gov.

A list of Miami-Dade County OEM Programs can be found at www.miamidade.gov/oem.

7.2 EXERCISE

All exercises will be planned, conducted and documented using the guidelines set forth in the Homeland Security Exercise Evaluation Program (HSEEP). All exercises will use NIMS/ICS Management Characteristics in accordance with Homeland Security Presidential Directive (HSPD)-5,

The City of Miami Beach, along with Miami-Dade County participates in the annual Statewide Hurricane Exercise as an opportunity to test and evaluate the ability to manage events that are not experienced on a daily basis. As permitted, the City of Miami Beach will participate in other all-hazards exercises to test and evaluate current plans and procedures.

DEM and Miami-Dade County OEM will provide disaster exercise assistance to government and non-governmental agencies as requested.

Detailed planning will be accomplished on an inter-departmental basis in preparation for Miami Beach EOC sponsored exercises. Representatives of each participating departments will develop action items for their Miami Beach EOC participants to resolve during the actual exercise.

An After-Action Review (AAR) will be conducted as soon as feasible after an emergency operation or exercise to identify improvements needed in training, planning and operations, and resource management. Information will be provided to all participants in an After-Action Report (AAR). The AAR will be consistent with HSEEP. The DEM will follow-up on identified actions to be taken to ensure their completion.

7.2.1 EXERCISE PLAN

The City of Miami Beach will conduct, at a minimum, one citywide exercise each year in accordance with the Department of Homeland Security's *National Planning Scenarios*. The *National Planning Scenarios* depict a diverse set of high-consequence threat scenarios of both potential terrorist attacks and natural disasters. Collectively, the 15 scenarios are designed to focus contingency planning for homeland security preparedness work at all levels of government and with the private sector. The scenarios form the basis for coordinated planning, training, exercises, and grant investments needed to prepare for emergencies of all types.

The exercise will be conducted in conjunction with other departments, each having a minimum of three objectives to test. Exercise types include drills, tabletops, functional, and full-scale. Documentation in the form of Player, Controller / Evaluator Handbook and

Exercise Plans, Master Scenario Events Lists (MSEL), AARs and Improvement Plan will be produced and one copy of each will be submitted to DEM. Following conduct of the exercise, a Hot Wash Debriefing and an After-Action Conference will be performed.

The City of Miami Beach will also:

- Participate with Miami-Dade County in a large-scale mass casualty exercise to include pre-exercise planning meetings and a post exercise critique.
- Participate with Miami-Dade County in an annual hurricane exercise. The exercise may be held in conjunction with a State sponsored hurricane exercise.
- Participate with Miami-Dade County in one or more emergency responder exercises involving mass casualties under various scenarios (e.g. Hazmat, transportation accident, natural disaster, terrorist act, etc.)
- Conduct hurricane briefings and training meetings with the Mayor, City Commission, department heads, and all other governmental and private emergency response agencies.
- Brief elected and key appointed officials on emergency management activities and hurricane preparedness.
- Conduct hurricane and emergency management seminars as requested.
- Attend FEMA and State emergency management courses as subject matter and availability dictate.

7.2.2 PROCEDURES

The Miami Beach EOC Coordinating Officer will use Homeland Security Exercise and Evaluation Program (HSEEP) guidance to develop an Exercise Design Team (EDT) involving representatives of critical county and municipal agencies to help design, develop and implement exercises. The EOC Coordinating Officer chairs the EDT and is responsible for all aspects of the exercise being implemented or resolved. The composition of the team depends largely upon the scenario of the exercise. HSEEP provides a set of guiding principles for exercise programs, as well as a common approach to exercise program management, design and development, conduct, evaluation, and improvement planning. HSEEP exercise and evaluation doctrine is flexible, adaptable, and is for use by stakeholders across the whole community and is applicable for exercises across all mission areas – prevention, protection, mitigation, response, and recovery.

The procedure utilized in developing the design of large-scale functional exercises is to identify those aspects that have not been recently tested or implemented (within 1 year), and develop objectives to examine those aspects. New procedures are tested for utility in the exercise. EDT members prepare objectives for their respective agency types and may also serve as controllers or evaluators during the exercise.

Exercise evaluation is performed by like agencies acting as evaluators. Evaluators observe the aspects of decision-making and implementation. Deficiencies that are found are reviewed and recommendations are put forth for improvement and are developed as

part of the exercise evaluation document. The EDT Chair is the Chief Controller of the exercise unless the coordinator is an active player. In that circumstance, an appropriate replacement is selected. The person designated as the Chair is responsible for the development, distribution, and follow up of the evaluation document.

DEM annually schedules a major hurricane exercise and participates in Miami Dade's as well as FDEM's exercises. The Training and Exercise Coordinator schedules all other exercises on an as needed basis.

7.2.3 HSEEP Compliance and Plan Improvement

DEM conducts tabletop and functional exercises as well as annual full-scale exercises (e.g. Hurricane Exercise, Active Shooter Exercises, etc.) to test the responsiveness and capability of the City of Miami Beach. Each exercise will test all or critical portions of the CEMP, including capabilities of equipment and the personnel to operate such equipment. Each exercise is evaluated through interviews of participating partner organizations following the exercise and adopted into an After-Action Report (AAR). Revisions will be made to the appropriate plans based on the AAR findings.

DEM observes the requirements of the Homeland Security Exercise and Evaluation Program (HSEEP) which is a capabilities and performance-based exercise program which provides a standardized policy, methodology, and terminology for exercise design, development, conduct, evaluation, and improvement planning. HSEEP compliance is defined as adherence to specific processes and practices for exercise program management and exercise design, development, conduct, evaluation, and improvement planning. DEM adheres to the four HSEEP performance requirements.

These requirements are as follows:

1. Conduct an annual Training and Exercise Planning Workshop and maintain a Multiyear Training and Exercise Plan.
2. Plan and conduct exercises in accordance with the guidelines set forth in HSEEP policy.
3. Develop and submit properly formatted After Action Report/Improvement Plans (AAR/IP).
4. Track and implement corrective actions identified in the AAR/IP.

7.3 Public Awareness and Education

7.3.1 Responsibilities

Public awareness and education prior to any emergency is crucial for successful public information efforts during and after an emergency. The responsibility of educating the public on disasters relies with the coordination of DEM and the Office of Marketing and Communications.

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7.3.2 PROGRAMS

The Office of Marketing and Communications and DEM staff work through a variety of programs to promote a high level of public awareness. Presentations are made throughout the City and as requested by various citizen or business groups. There are materials developed specifically for visitors, people with special needs, the hospitality industry, and other transient populations. Education programs are also advanced by city and county websites and public displays of preparedness information. These programs are conducted in English, and when possible, in Spanish and Haitian Creole.

7.3.3 JOINT INFORMATION CENTER (JIC)

In the event of a disaster, the County or the City may set up a JIC. The JIC will be staffed with public affairs representatives from local, State, Federal and partnering response agencies. The purpose of the JIC is to ensure the coordinated, timely and accurate release of information to the news media and the public regarding disaster related activities. The City of Miami Beach Crisis Communications Plan provides further information on this process.

7.3.4 EMERGENCY PUBLIC INFORMATION

When an emergency threatens the community, emergency instructions are distributed through the various communications systems and social media outlets available to the EOC.

The Emergency Alert System (EAS) is used to deliver emergency messages about immediate threats to the general public via electronic media stations. All cable channels are capable of transmitting messages regarding impending disasters, shelter locations and assignments, along with other emergency information.

MBAlert is used to transmit emergency notifications to wireless devices such as cellular phones, text pagers, Personal Data Assistance (PDA) devices and e-mails. The Answer Center staff is also trained to answer questions from the public during an event. The Answer Center filters information gained from the public.

The Office of Marketing and Communications is responsible for the collection, evaluation, and tweeting of information during a partial or full-scale activation. The EOC Planning Section Chief and the Lead PIO will vet information suitable for dissemination via social media.

The City Manager, Mayor, Director of Emergency Management or designee, and the Lead PIO (Office of Marketing and Communications) are the only "official" spokespersons for Miami Beach who are authorized to release information to the media when the EOC is activated. All public information will be coordinated and approved by concerned agencies and departments and released by one of these individuals.

The above communication tools are conducted in English and Spanish. Particular emphasis is made to communicate with transient and tourist populations.

8 FINANCIAL MANAGEMENT

During and after emergency/disaster events normal fiscal and administrative functions and regulations may need to be temporarily modified or suspended in order to support emergency operations in a timely manner. Additionally, if emergency costs can be documented, certain reimbursements from state and federal sources may be possible.

The City of Miami Beach employs a uniform code of administrative procedures that addresses the completion and timely filing of all financial reports.

In the event of EOC activation, each City Department assigned to an ESF incurs expenses in performing their support and response functions. In most cases, those expenses are eligible for reimbursement by state or federal sources. All costs, whether budgeted, unbudgeted or not reimbursed from state or federal sources, are absorbed in each department's respective budgets. The Departments and agencies are responsible for tracking and documenting their own expenses. Departments complete a FEMA-compatible Daily Activity Report (DAR) that is processed pursuant to administrative procedures. Agencies that are not fiscally responsible to the City of Miami Beach must utilize their own established reporting procedures and submit supporting documentation to the EOC.

8.1 POLICIES

- All departments will make every effort possible to assure the safety of cash, checks, accounts receivable, and assist in the protection of other valuable documents/ records.
- All City employees are critical to the essential functioning of the City in times of emergency and are therefore considered essential. During emergency operations, non–essential administrative activities may be suspended, and personnel normally performing those activities may be assigned to other departments to provide emergency support. Personnel are to be assigned according to phases of the emergency and department directors will determine employees that are essential to the Preparedness phase, Response phase and Recovery phase of an emergency operation.
- Each department will designate specific personnel to be responsible for documentation of disaster operations and expenditures. Emergency expenditures will be incurred in accordance with existing City emergency purchasing procedures. The names of those personnel will be provided to the Finance and Administration Section Chief at the beginning of each fiscal year.
- Each department will keep an updated inventory of its personnel, facilities, and equipment resources as part of their emergency plans and procedures.
- Emergency workers are advised to carry personal insurance on themselves, vehicles, and equipment.

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8.2 ADMINISTRATION

- During an emergency or disaster, administrative procedures may have to be suspended, relaxed, or made optional in the interest of protecting life or property. Departments are authorized to take necessary and prudent actions in response to disaster emergency incidents. Emergency Service / Public Safety officers have independent authority to react to emergency situations.
- Normal procedures which do not interfere with timely accomplishment of emergency tasks, will continue to be used. Those emergency administrative procedures which depart from "business–as–usual" will be described in detail in department emergency and disaster policies, procedures, and instructions or in their incident action plan during an EOC activation.
- Departments are responsible for keeping records of the name, arrival time, duration of utilization, departure time and other information relative to the service of emergency workers and equipment, as well as documentation of the injuries, lost or damaged equipment, and any extraordinary costs.

8.3 FISCAL

In the event of a potential threat or disaster and pre-event protective measures are implemented, departments will begin tracking expenditures. Documentation will include: logs, formal records and file copies of all invoices, receipts, and personnel time sheets. Upon the declaration of a Local State of Emergency by the City or County Mayor, or a Declaration of a State of Emergency to include the City of Miami Beach by the Governor, the Finance Department will issue an event project string for the purpose of expenditure/costs tracking. Human Resources will also issue payroll reason codes to assist with payroll tracking for the event. To assist in the documentation process the Finance department will make available a repository with access for all departments.

- During an activation, the EOC "Finance and Administration Section" will be staffed to handle the administrative and financial functions during large emergencies and/or disasters. This Section is responsible for the payment and monitoring of expenses associated with any disaster or emergency response of the City for which the EOC has activated. Some functions that fall within the scope of this Section include recording of personnel time; maintaining vendor contracts, insurance compensations and claims associated with property damage, injuries or fatalities of the incident; and conducting an overall cost analysis for the incident. This Section is responsible to ensure that all appropriate expenditure documentation and record keeping is undertaken to facilitate the FEMA reimbursement process if appropriate, and operates in close coordination with the Planning and the Logistics Sections. Department personnel normally assigned to the Finance and Administration Section include Procurement (Procurement Unit),

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Finance and Office of Management & Budget - OMB (Cost Unit), and Human Resource (Time Unit and Claims/Compensations Unit).

- Procurement personnel shall facilitate the acquisition of all supplies, equipment, and services necessary to support the emergency response actions of Miami Beach departments in close coordination with the Logistics Section.
- When circumstances dictate, emergency response field personnel may be given purchasing authority after coordination with the City's Procurement Department and the Logistics Section of the EOC. A record of all emergency response purchases shall be reported to Procurement in accordance with City procurement policies. A complete and accurate record of all purchases, a complete record of all properties commandeered to save lives and property, and an inventory of all supplies and equipment purchased in support of the emergency response shall be maintained.
- The acquisition of all goods or services related to an emergency event should first be requested through the Logistics Section. Prior to purchasing/acquiring any goods or services related to the emergency event, a formal resource request must be submitted to the Logistics Sections via WebEOC. This is extremely important in order for the City to minimize duplication of efforts by multiple departments and to maximize access to resources locally, regionally and nationally.
- The Logistics Section is responsible for identifying the most efficient means of acquiring requested resources, in adherence to the emergency response procurement process. This includes contacting other departments, other jurisdictions, Miami-Dade County, as well as City approved vendors for available resources.
- If the Logistics section has determined a requested resource is not currently available through other channels and a vendor has been identified, the emergency response procurement process is implemented.
    - If the purchase is eligible to be made via a p-card, less than $5,000 (Citywide Procedure, Section 16.02), the department proceeds with the purchase as normal. However, the p-card purchases must be logged by the department and supported by a receipt. All receipts must be coded with the designated project string e.g. “E-Irma”. When department personnel reconcile p-card statements, the designated project string (e.g. EIrma-Other Cost-FEMA) is entered as well as selecting the correct category: A, B, C, D, E, F, and G.
    - If the purchase does not meet the Section 16.02 threshold for p-card purchases (i.e. is greater than $5,000) an Emergency Response Purchase Order is required. These purchase orders are issued directly by the Procurement Department and require the “Emergency Response Requisition Worksheet” be completed and submitted to the Finance and

Administration Section via WebEOC. The designated project string (example.“Elrma-Other Cost-FEMA”) must be entered on the form in the “project tracking” section. The Cost Unit within the Finance and Administration Section will review the form for accuracy including pertinent information needed to facilitate the documentation and tracking process. Once review is complete the form will be assigned to the Procurement Unit who will issue the Purchase Order.

- Payroll expenses are extremely important in the documentation and tracking process. All payroll entries and manual timesheets should also be coded for the event - Payroll coordinators must use reason code issued by the Human Resource department, example: “IRMA”. The Time Unit, also part Finance and Administration Section will be responsible for ensuring all payroll entries are properly coded

- Although certain formal procedures may be waived during a disaster, this in no way lessens the requirement for sound financial management and accountability. Departments will identify specific personnel to be responsible for documentation of disaster related costs and utilize existing administrative methods to keep accurate records separating disaster operational expenditures from day–to–day expenditures. The names of those personnel will be provided to the Finance and Administration Section Chief at the beginning of each fiscal year. Department Directors will be held responsible for deviations from the emergency purchasing procedures.
- Miami Beach may qualify for reimbursement of certain emergency costs from state, and/or federal disaster recovery programs. Miami Beach may also collect damage reimbursement from its insurance carriers. Successful documentation of expenditures will maximize the reimbursements and assistance that the City and its citizens will receive. All Miami Beach departments and agencies are expected to include requirements for emergency fiscal record keeping in their emergency plans and procedures.

8.4 LOGISTICS

- Departments responding to emergencies and disasters will first use their available resources. When this plan is implemented, the EOC becomes the focal point for procurement, distribution and replacement of personnel, equipment and supplies. Scarce resources will be allocated according to established priorities and objectives of the Incident Commander(s). The logistics function is broadly defined and includes goods and services, personnel resources and volunteer resources.
- Logistics will be needed to support the field operations, the Emergency Operations Center (EOC) operations, and disaster victims.
- All departments are expected to maintain an inventory of all non–consumable items, to include their disposition after the conclusion of the emergency

proclamation. Items that are not accounted for, or that are placed in City inventory as an asset will not be eligible for reimbursement.

8.5 Financial Responsibilities and Tasks

8.5.1 Finance and Administration Section Chief

- Facilitate the acquisition of supplies, equipment, and services necessary to support the emergency response actions.
- Facilitate the acquisition of supplies, equipment, and services necessary to support the emergency response actions. (Procurement Unit)
  - Ensure that all obligation documents initiated in the incident are properly prepared and completed.
  - Purchasing cards should be utilized as much as possible to facilitate purchases.
- Establish and maintain a system whereby incident costs are identified and accumulated for state and federal reimbursements (Cost Unit).
  - Maintain accurate records of funds, materials, and man–hours expended as a direct result of the disaster.
  - Direct Departments to keep accurate records separating disaster operational expenditures from day–to–day expenditures.
- Documentation will include: Logs, formal records and file copies of all expenditures, receipts, personnel time sheets.
  - Ensure that Departments keep records of the name, arrival time, duration of utilization, departure time and other information relative to the service of emergency workers, as well as documentation of the injuries, lost or damaged equipment, and any extraordinary costs.
  - Ensure payroll system set up to pay employees.
- Determine which administrative procedures may have to be suspended, relaxed, or made optional in the interest of protecting life or property.
  - Normal procedures which do not interfere with timely accomplishment of emergency tasks will continue to be used.
  - Determine need to depart from “business–as–usual” and issue emergency administrative procedures as appropriate.
- Ensure supply of vouchers, receipts, and other forms.
- Brief Department administration personnel on all incident related business management issues needing attention and follow up.
- Provide input in all EOC incident planning sessions on financial and cost analysis matters.
- Provide data and information to ESF #5.

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- Secure emergency cash.

8.5.2 CITY ATTORNEY

- Provide legal advice to departments concerning emergency administrative procedures.

8.5.3 CITY CLERK

- Preserve vital City records.

8.5.4 CITY COMMISSION

- Appropriate funds to meet disaster expenditure needs.
- Extend or terminate emergency/disaster declarations.

8.5.5 CITY MANAGER

- Appropriate funds to meet disaster expenditure needs, if necessary.
- Extend or terminate emergency/disaster declarations.
- Assist with implementing procedures and directives as needed.

8.5.6 DEPARTMENTS, ALL

- Document emergency work performed.
- Document costs. Documentation will include: Logs, formal records and file copies of all expenditures, receipts, personnel time sheets.
- Preserve essential records.

8.5.7 OMB, FINANCE & ACCOUNTING, PROCUREMENT

- Work with the EOC and all departments to project future expenditures.
- Provide state and federal reimbursement forms.

8.5.8 HUMAN RESOURCES

- Provide information and assistance to City regarding personnel policies during emergencies.

8.5.9 INFORMATION TECHNOLOGY

- Ensure computer, voice and data support.

8.5.10 HUMAN RESOURCES, RISK MANAGEMENT

- Ensure that all forms required by Workers Compensation are completed, maintain a file of injuries and illness associated with the incident and coordinate the investigation in all civil tort claims involving property associated with, or involved in, the incident.
- File reports on City property losses.

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8.6 INSURANCE

The City of Miami Beach Human Resources Department, Risk Management and Benefits Division maintains a database of current insurance coverages.

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9 AUTHORITIES AND REFERENCES

9.1 MEMORANDA AND REFERENCES

Mutual Aid Agreements (MAAs) and Memoranda of Understanding (MOU) dealing with emergency operations will be entered into as the need arises. The primary agency for the type of agreement involved will develop, coordinate and monitor their agreement(s). In most cases, MAAs involving resources of the City of Miami Beach departments will be negotiated and signed by the City Manager, upon approval by the City Commission.

Miami Beach is a signatory to the Statewide MAA for Catastrophic Disaster Response and Recovery. The Statewide MAA was first adopted by City of Miami Beach Resolution #96-22197 by the Mayor and City Commission on November 6, 1996, then renewed by Resolution #2001-24326 on April 18, 2001. This ties all signatories, which includes most jurisdictions within the State, together in a compact to facilitate rapid assistance to those, which are impacted by a major disaster.

9.2 AMERICANS WITH DISABILITIES ACT AND GUIDELINES FOR FUNCTIONAL NEEDS SUPPORT SERVICES

The Americans with Disabilities Act (ADA) of 1990 is incorporated into emergency preparedness plans. This law prohibits discrimination on the basis of disability. A best practice used to effectively address the needs of persons with disabilities or access and functional needs in emergency preparedness plans is establishing a process to pre-identify resources which may be used to fulfill requests from these individuals for reasonable accommodations they may need in emergency situations.

Functional Needs Support Services (FNSS) are defined as services that enable children and adults with or without disabilities who have access and functional needs to maintain their health, safety, and independence in a general population shelter. This may include augmentation of trained medical professionals, durable medical equipment (DME), consumable medical equipment (CME), and reasonable modification to common practices, policies and procedures. Individuals requiring FNSS may have sensory, physical, mental health, cognitive and/or intellectual disabilities affecting their capability to function independently without assistance. Additionally, the elderly, women in the late stages of pregnancy, and individuals requiring communication assistance and bariatric support may also benefit from FNSS.

On July 22, 2004, Executive Order 13347 was issued (Individuals with Disabilities in Emergency Preparedness), directing the federal government to work together with state, local and tribal governments, as well as private organizations, to appropriately address the safety and security needs of people with disabilities. The Stafford Act and Post-Katrina Emergency Management Reform Act (PKEMRA), along with Federal civil rights laws, mandate integration and equal opportunity for people with disabilities in general population shelters.

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The City of Miami Beach makes every effort to comply with Title II of the Americans with Disabilities Act (ADA) as well as any other applicable laws related to emergency and disaster-related programs, services and activities for individuals with disabilities who have access and functional needs.

9.3 City of Miami Beach

- City of Miami Beach Code of Ordinance: Chapter 2, Article IV, Division 1, Sec. 2-191 established a Department of Emergency Management
- City of Miami Beach Code of Ordinance: Chapter 26- Civil Emergencies
- City of Miami Beach Code of Ordinance: Chapter 110.II.1.110-46 – Authority of City Manager during water emergencies
- City of Miami Beach Resolution No. 2001-24326, Florida Statewide Mutual Aid Agreement for Reciprocal Emergency Aid and Assistance

9.4 Declaration of Emergency (Miami Beach Code A.26.II Section 26-31 and Section 26-35)

The City Manager, as the governing entity of the City of Miami Beach, is vested with certain authority in regard to emergency management pursuant to Chapter 252, Florida Statutes. One aspect of such authority is the power to declare a State of Local Emergency. With regard to the powers to declare a State of Emergency, to order an evacuation, to order re-entry, and to declare a termination of the State of Emergency, that authority is delegated to the City Manager.

Whenever the City Manager determines that there has been an act of violence or a flagrant and substantial defiance of or resistance to a lawful exercise of public authority and that, on account thereof, there is reason to believe that there exists a clear and present danger of a riot or other general public disorder, widespread disobedience of the law, and substantial injury to persons or to property, all of which constitute an imminent threat to public peace or order and to the general welfare of the city, they may declare that a State of Emergency exists within that jurisdiction.

A State of Emergency established under sections 26-31—26-34 shall commence upon the declaration thereof by the City Manager and shall terminate at the end of a period of 72 consecutive hours thereafter unless, prior to the end of such 72-hour period, the City Manager, the Governor, County Commission, or City Commission shall have terminated such State of Emergency. Any extension of the 72-hour time limit must be accomplished by request from the City Manager and the concurrence of the City Commission by duly enacted ordinance or resolution in regular or special session.

9.5 Emergency Conditions (Miami Beach Code A.26.II Section 26-33 – Discretionary Emergency Measures)

Whenever the City Manager declares that a state of emergency exists, (necessary to protect life, safety and property-including, but not limited to) pursuant to section 26–31,

he may order and promulgate all or any of the following emergency measures, in whole or in part, with such limitations and conditions as he may deem appropriate:

- The establishment of curfews, including but not limited to the prohibition of or restrictions on pedestrian and vehicular movement, standing and parking, except for the provision of designated essential services such as fire, police and hospital services, including the transportation of patients thereto, utility emergency repairs, and emergency calls by physicians.
- The prohibition of the sale or distribution of any alcoholic beverage, with or without the payment or a consideration
- The prohibition of the possession on any person in a public place of any portable container containing any alcoholic beverage.
- The closing of places of public assemblage with designated exceptions.
- The prohibition of the sale or other transfer of possession, with or without consideration, of gasoline or any other flammable or combustible liquid altogether or except by delivery into a tank properly affixed to an operable motor–driven vehicle, bike, scooter, boat or airplane and necessary for the propulsion thereof.

Any such emergency measure so ordered and promulgated shall be in effect during the period of emergency in the area or areas for which the emergency has been declared.

9.6 Miami-Dade County

- Miami-Dade County Code of Ordinance: Chapter 8B-Emergency Management
- Miami-Dade County CEMP
- Miami-Dade County Local Mitigation Strategy (LMS)
- Turkey Point Standard Operating Procedures

9.7 State of Florida

- The State of Florida Comprehensive Emergency Management Plan.
- The State of Florida Radiological Emergency Preparedness Annex
- Florida Emergency Response Team Mass Migration Annex
- Chapter 252 of the Florida Statutes (State Emergency Management Act, as amended). Section 252.38 directs each county to establish and maintain an emergency management plan and program that is coordinated and consistent with the State CEMP and program. The statute further specifies county and municipal emergency management powers and responsibilities.
- Governor's Executive Order 80-29, which delegates specific emergency responsibilities and directs certain emergency management actions to county governments.
- Rules 9G-6, 9G-7, 9G-11, 9G-14, 9G-19 and 9G-20, Florida Administrative Code.

- State of Florida Department of Community Affairs Resource and Finance Management Policies and Procedures for Emergency Management.
- Executive Order 05-122 dated June 10, 2005 which establishes the State Emergency Response Commission. Executive Orders 98-153 and 98-155 are hereby rescinded.

9.8 Florida Statues

- Chapter 14, F.S., Governor
- Chapter 22, F.S., Emergency Continuity of Government
- Chapter 23, F.S., Florida Mutual Aid Act
- Chapter 154, F.S., Public Health Facilities
- Chapter 161, F.S., Beach and Shore Preservation
- Chapter 187, F.S., State Comprehensive Plan
- Chapter 245, F.S., Disposition of Dead Bodies
- Chapter 381, F.S., Public Health
- Chapter 395, F.S., Hospital Licensing and Regulation
- Chapter 401, F.S., Medical Telecommunications and Transportation
- Chapter 553, F.S., Building Construction Standards
- Chapter 870, F.S., Riots, Affrays, Routs, and Unlawful Assemblies
- Chapter 943, F.S., Domestic Security

9.9 Florida Administrative Code

- Chapter 27P-2, 27P-6, 27P-11,27P-14, 27P-19, 27P-20, and 27P-21 Florida Administrative Code
- Chapter 73C-40, Florida Administrative Code

9.10 Executive Orders

- Executive Order No. 80-29, Disaster Preparedness
- Executive Order 05-122, State Emergency Response Commission

9.11 Federal Government

- Department of Homeland Security Caribbean Mass Migration Framework
- Department of Homeland Security Maritime Migration Plan
- U.S. Coast Guard Maritime Response Operations Plan
- U.S. Coast Guard Southeast Florida Area Maritime Security Plan
- U.S. Coast Guard Operation Vigilant Sentry Plan
- U.S. Coast Guard Southeast Florida Area Contingency Plan
- Public Law 103 - 337, which reenacted the Federal Civil Defense Act of 1950 into the Stafford Act.

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- Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, which provides authority for response and recovery assistance under the Federal Response Plan, which empowers the President to direct any federal agency to utilize its authorities and resources in support of State and local assistance efforts.
- Public Law 106-390, Disaster Mitigation Act of 2000, to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act to authorize a program for pre-disaster mitigation, to streamline the administration of disaster relief, to control the Federal costs of disaster assistance, and for other purposes.
- The National Strategy for Homeland Security, July 16, 2002.
- Price-Anderson Amendments Act of 1988, Public Law 100-408, as amended.
- Emergency Management Assistance Compact, Public Law 104-321.
- Public Law 107-296, 116 Stat. 2135 (2002) (codified predominantly at 6 U.S.C. 101-557 and in other scattered sections of the U.S.C.), established the Department of Homeland Security with the mandate and legal authority to protect the American people from the continuing threat of terrorism.
- Public Law 93-234, Flood Disaster Protection Act of 1973, as amended by the Flood Insurance Reform Act of 1994, 42 U.S.C. 4001, et seq, provides insurance coverage for all types of buildings.
- Public Law 99-499, Superfund Amendments and Re-authorization Act of 1986, Part III, the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. 11001, et seq, which governs hazardous materials planning and community right-to-know.
- Public Law 101-615, Hazardous Materials Transportation Uniform Safety Act (HMTUSA), which provides funding to improve capability to respond to hazardous materials incidents.
- Public Law 95-510, 42 U.S.C. 9601, et seq, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, which requires facilities to notify authorities of accidental releases of hazardous materials.
- Public Law 101-549, Clean Air Act Amendments of 1990, which provide for reductions in hazardous air pollutants and risk management planning requirements.
- Public Law 84-99, 33 U.S.C. 701n, Flood Emergencies, authorizing an emergency fund for flood emergency preparation, flood fighting and rescue operations, and repair and restoration of flood control works threatened or destroyed by flood.

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- Public Law 91-671, Food Stamp Act of 1964, in conjunction with Section 412 of the Stafford Act, relating to food stamp distributions after a major disaster.
- Public Law 89-665, 16 U.S.C. 470, et seq, National Historic Preservation Act, relating to the preservation of historic resources damaged as a result of disasters.
- Stewart B. McKinney Homeless Assistance Act, 42 U.S.C. 11331-11352, Federal Emergency Management Food and Shelter Program.
- National Flood Insurance Act of 1968, 42 U.S.C. 4101, et seq, as amended by the National Flood Insurance Reform Act of 1994 (Title V of Public Law 103-325).
- Regal Community Development and Regulatory Improvement Act of 1994.
- HSPD 3: Homeland Security Advisory System.
- HSPD 5: Management of Domestic Incidents.
- HSPD 7: Critical Infrastructure Identification, Prioritization, and Protection.
- HSPD 8: National Preparedness.
- Presidential Decision Directive 39, United States Policy on Counter Terrorism.
- Executive Order 11988, Flood Plain Management. Executive Order 12656, Assignment of Emergency Preparedness Responsibilities.
- Federal Emergency Management Agency (FEMA) Public Assistance Guide (FEMA 322).
- National Response Framework (NRF)
- National Incident Management System (NIMS)

9.12 Coordination of Government Action

Under the provisions of Chapter 252, Florida Statutes and the Florida CEMP, any local political subdivision may issue an emergency declaration for its respective jurisdiction without prior declaration by other levels of government. Along with this power of declaration is the responsibility to order evacuation as early as required by specific local conditions.

Declarations and evacuation orders of higher levels of government are binding upon lower levels of government. For example, a State Declaration is binding upon counties and municipalities and a county order is binding upon a municipality. There is an obvious need for coordination of action with other levels of government and private agencies to ensure the availability of adequate resources to support evacuation. Resources of higher levels of government will generally not be available without an emergency declaration by that higher level of government. For instance, increased State assistance for response and recovery becomes available only following a State Declaration.

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10 APPENDIX A – HAZARD PROFILES

10.1 NATURAL HAZARDS

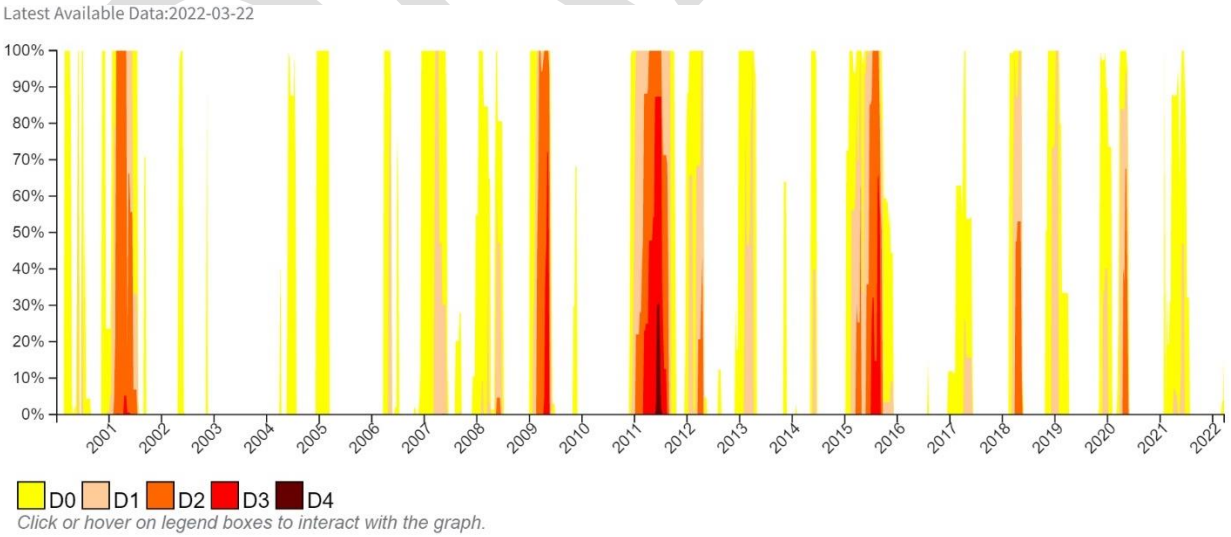
10.1.1 DROUGHT

A drought is characterized as an extended period of time with persistent dry weather conditions in a geographic area that typically has none to minimal precipitation. A drought can however be defined in several different ways depending on the geographical region and situation:

- Meteorological drought: when the normal level of precipitation has a significant measurable drop.
- Agricultural drought: when the level of soil moisture drops below the suitable range for agricultural growth.
- Hydrological drought: when the surface water and underground water supplies fall below normal.
- Socioeconomic drought: when water shortages seriously interferes with human activity

Historically, 48 drought events have been recorded between 1950 and 2017 (71% probability of having a drought in any one year). There have been no reported dollar losses to either physical structures or crops. Although, on July 15, 2015, USDA designated Miami-Dade County as a primary natural disaster area due to the persistent drought conditions between January and July, but no definitive dollar amounts of damages were reported for this incident. The figure below shows historical conditions for Miami-Dade County weekly from 2000-2022.

Figure 8: Drought.gov Historical Conditions for Miami-Dade County



The City of Miami Beach's water is supplied by Miami-Dade County. Miami-Dade County obtains its potable water supply from the Biscayne Aquifer, which is primarily replenished by rainwater. In times of drought, water is supplied by the South Florida Water

Management District (SFWMD) regional system. It should be noted however, that the regional system is designed to supplement Miami-Dade wells and not to replace them. Over-pumping the well fields in time of drought can lead to saltwater intrusion and a permanent compromise of Miami-Dade's potable water supply. SFWMD has constructed levees to aid in the protection of the county's well fields from saltwater intrusion.

10.1.2 Disease Outbreaks

The City of Miami Beach hosts numerous visitors, both domestic and international, and any given day there may be more than 222,000 people (excluding residents) from tourists and daily workers alone within the city. This high density coupled with our warmer climate and outdoor activities provides the potential for disease and pandemic outbreaks.

Vector-borne diseases (VBDs) are a type of infectious diseases which are transmitted to humans through any agent (referred to as vectors) that carry the disease-causing pathogens. Common vectors include mosquitoes, ticks, and flies, which can carry VBDs such as the Zika virus, dengue fever, malaria, and Lyme disease.

Pandemics occur when disease affects large numbers of the population worldwide. Epidemics occur when large numbers are affected in a more localized area such as a City, Region, State, or Nation. Influenza Pandemics have occurred four times in the world's human population.

- **The 1918-1919 Spanish Flu** caused the highest number of deaths. India had 16 million deaths, while the United States had 675,000 deaths. In England 230,000 died. In Germany 225,000, and in France 166,000 perished. Worldwide, fatalities were estimated at 20 to 50 million. During the Spanish Flu pandemic, Spain closed its government. New York City closed its port and trains did not run. The British Navy did not sail for three (3) weeks.
- **The 1957-58 Asian Flu** was identified in February 1957 in China. By June, it had crossed the Pacific Ocean and entered the United States. Globally, it caused a million deaths. In the United States, 70,000 people died.
- **The 1968-69 Hong Kong Flu** caused four million deaths worldwide and 34,000 deaths in the United States. A pandemic of influenza A (H3N2), the virus was first detected in Hong Kong in early 1968 and eventually spread to the United States later that year.
- **2009-2010 H1N1 or Swine Flu Pandemic** – According to the Center for Disease Control (CDC), there have been 14,286 confirmed deaths worldwide due to the H1N1 Virus, or as commonly known, Swine Flu.

Additional pandemic outbreaks have affected the City of Miami Beach directly.

- **2013-2016 Ebola -** This disease, a serious hemorrhagic fever, was first described by world health officials in 1976, but reached epidemic proportions in West Africa in 2013. In just the three most affected countries, Guinea, Liberia and Sierra Leone, there were more than 28,500 cases, resulting in more than 11,000 deaths. Worldwide today, there are over 10,000 survivors of Ebola, but the disease was considered the most significant pandemic in the world as cases were contracted -

- mostly by undiagnosed traveling health workers -- and brought to other countries. In 2014, one case was discovered in the United States, and by summer 2015 there were four confirmed cases in the U.S., with one death reported.

- **2015-2016 Zika Virus -** The World Health Organization (WHO) declared the outbreak of Zika virus, which most experts consider to be spread primarily through the *Aedes aegypti* mosquito. It can also be transmitted from mother to fetus and through sexual contact. Zika was originally determined to be a mild infection, however, by 2015, as incidents of the disease in Brazil and adjacent countries in South America were directly correlated with neurological problems and birth defects, the WHO designated the outbreak to be a Public Health Emergency of International Concern. Travel warnings were issued throughout the world, and the United States CDC issued travel advisories in four locations in South Florida (all were lifted by December 2016). The total number of Zika cases reported in Florida for 2016 is 1,325, in Miami Beach there were 5 cases reported in the same year. The total number of Zika cases reported in Florida for 2017 is 4.

Figure 9: Zone of active Zika transmission in the City of Miami Beach, 2016:



  - On August 19, 2016, CDC issued guidance for a 1.5-square-mile section of Miami Beach identified to have mosquito-borne spread of Zika; on

September 17, this section was expanded to a 4.5-square-mile area. On November 21 CDC removed the red area designation for the North Miami Beach area. On December 8, CDC removed the red area designation for the South Miami Beach area. On June 2, 2017, CDC lifted the yellow area designation for all of Miami-Dade County (CDC, 2018).

- **COVID-19, 2020 -** On January 11, 2020, Chinese health authorities preliminarily identified more than 40 human infections with novel coronavirus in an outbreak of pneumonia under investigation in Wuhan City, Hubei Province, China. Chinese health authorities subsequently posted the full genome of the so-called "novel coronavirus 2019", or "2019-nCoV", in GenBank ®, the National Institutes of Health genetic sequence database.

  On February 11, 2020 the World Health Organization announced an official name for the disease that is causing the 2019 novel coronavirus outbreak, COVID-19 and declared it a pandemic outbreak on March 11, 2020

10.1.3 EROSION

Erosion is the wearing away of land or the removal of beach or dune sediments by wave action, tidal currents, littoral currents, or drainage. While there are many different types of erosion, coastal erosion remains a continuous problem for the entire City of Miami Beach coastline. Our beach and dune system is a natural barrier that can help protect us from the impacts of storm surge and sea level rise. The most severe erosion occurs in relation to hurricanes and tropical storm, typically active from June to November. There are approximately 7 miles of beaches in the City and 63.26 miles of water frontage at risk for erosion. In 2017, Hurricane Irma caused some beach erosion throughout Miami-Dade County with the preliminary assessment estimating a loss of about 170,000 cubic yards of sand.

- **Beach Erosion** – Beach erosion occurs when waves and currents remove sand from the beach system. The narrowing of the beach threatens coastal properties and tourism revenue in coastal counties throughout the United States.
- **Dune Erosion** – Dune erosion occurs when waves attack the front face of the sand dune, reducing the volume and elevation of the dune. Erosion of the sand dune leaves coastal properties more vulnerable to future storms.
- **Overwash** – When waves exceed the elevation of the dune, sand is transported across the island in a process known as overwash. When overwash occurs, it often results in significant damage to coastal property.
- **Inundation and Island Breaching** – Inundation occurs when the beach system, or the sandy profile located between the most seaward (primary) dune and the shoreline, is completely submerged under the rising storm surge. Strong currents may carve a channel in the island in a process known as island breaching.

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The City's beaches provide storm surge protection and coastal erosion can diminish this natural buffer. Sea turtles nesting grounds may also be impacted and the beaches are a big draw for tourism. Miami Beach's shoreline is highly developed.

Coastal erosion has been occurring for years, with the first study conducted in 1930 and a restudy done in 1961. As a result, from 1975-1982 the USACE implemented the Miami-Dade County Beach Erosion control and Hurricane Surge Protection project that cost about $48 million. It is estimated for every $1 that is invested in beach nourishment that there is a return of about $700 foreign, primarily tourism impacts. USACE recently completed a $11.5 million project to widen 3,000 feet stretch of Miami Beach's shore, that was washing away. The shore between 46th and 54th street was expanded by 230 feet to protect the island from storm surge. The project was funded with a combination of federal, state and county dollars and completed in February 2017. In 2020 61,000 tons of sand was used to replenish the areas of 65th, 55th, 44th, and 27th streets.

- **September 2017** – Hurricane Irma caused some beach erosion throughout Miami-Dade County. The preliminary damage assessments estimated a loss of 170,000 cubic yards of sand. The money amount in damages has not been determined.
- **October 2016** – Hurricane Matthew caused minor beach erosion, as it travelled north-ward parallel to Florida's east coast. Miami-Dade County agencies and municipalities estimated close to $1M in damages due to coastal erosion.
- **October 2012** – Hurricane Sandy never made landfall, but paralleled the South Florida coast causing coastal erosion with reports of waves up to 10 feet in Miami-Dade. There was no Presidential Declaration for damages within Miami-Dade. Hurricane Sandy, was estimated to cause over $2M in damages to beaches including the following:
    - Miami Beach 26th – 29th Street – approximately 10,000 cubic yards
    - Miami Beach 44th – 46th Street – approximately 2,500 cubic yards
    - Miami Beach 53rd – 56th Street – approximately 3,000 cubic yards
    - Miami Beach 63rd – 66th Street – approximately 5,000 cubic yards

10.1.4 Extreme Temperatures

The NWS Miami Office noted in their 2021 Annual Weather Summary that Miami International Airport (MIA) Miami International Airport had an average summer temperature of 83.7 degrees Fahrenheit. This equals the 30-year normal. Miami observed 60 days of temperatures at or above 90 degrees this summer, which is below the normal total of 64 days. The highest temperature was 94 degrees on June 13th, July 3rd, July 22nd, and August 31st, and the lowest was 71 degrees on July 12th.

Miami Beach has experienced temperatures of 35ºF or lower on 85 occasions since 1948. In each case, the low temperature occurred in a period from late November to early March with the peak number of events occurring in January. Demands for electricity during unusually hot or cold weather results in the interruption of service and increases the probability of rolling brownouts.

10.1.5 FIRES

During prolonged dry periods, fire hazard is increased. The scenario, especially in concert with below normal water supplies or rainfall presents a substantial hazard to the community.

The City of Miami Beach is most vulnerable to structure fires. With numerous multi-story buildings (many of which are of older construction) and heavy density of the buildings in most areas, a large structure fire has the potential to spread from one building to another causing major damage, this in turn displaces residents and tourists, and disrupts local businesses and traffic, potentially causing substantial impact to the economy.

Currently, the Miami Beach Fire Department's Ladder Trucks have the capability of extending 100 feet, reaching seven or eight stories depending on how close the apparatus can approach the involved structure.

10.1.6 FLOODING

Flooding is an overflowing of water onto land that is normally dry. This can happen during heavy rains, when ocean waves come onshore, and when regular drainage capabilities are compromised. Flooding can occur with only a few inches of water, or it may happen with several feet of water. Flooding can affect many different communities covering several states during a single flooding event. Sunny day flooding and tidal flooding are discussed in the Sea Level Rise section.

Table 12: Common Flood Types

Common Flood Types	
Category	**Criteria**
River or Canal Overbank Flooding	When water levels rise in a river due to excessive rain from tropical systems making landfall, persistent thunderstorms over the same area for extended periods of time
Ponding	When water levels rise in a land locked area, lake or detention basin due to excessive rain from tropical systems making landfall, persistent thunderstorms over the same area for extended periods of time. In South Florida, some of the severe localized thunder-storms frequently exceed 3 inches/h, exhausting the storage and infiltration capacity of the drainage system.
Coastal Flooding	When a hurricane, tropical storm, or tropical depression produces a deadly storm surge that overwhelms coastal areas as it makes landfall. Storm surge is water pushed on shore by the force of the winds swirling around the storm. This advancing surge com-bines with the normal tides to create the hurricane storm tide, which can increase the average water level 15 feet or more. The greatest natural disaster in the United States, in terms of loss of life, was caused by a storm surge and associated coastal flooding from the great Galveston, Texas, hurricane of 1900. At least 8,000 people lost their lives.

Common Flood Types	
Category	**Criteria**
Inland or Riverine Flooding	When tropical cyclones move inland, they are typically accompanied by torrential rain. If the decaying storm moves slowly over land, it can produce rainfall amounts of 20 to 40 inches over several days. Widespread flash flooding and river flooding can result. In the 1970s, '80s, and '90s, inland flooding was responsible for more than half of the deaths associated with tropical cyclones in the United States. The state of Florida has nearly 121,000 census blocks potentially threatened by riverine flooding, translating to nearly $880 billion in property.
Flash Flooding	A rapid rise of water along a stream or low-lying urban area. Flash flooding occurs within six hours of a significant rain event and is usually caused by intense storms that produce heavy rainfall in a short amount of time. Excessive rainfall that causes rivers and streams to swell rapidly and overflow their banks is frequently associated with hurricanes and tropical storms, large clusters of thunderstorms, supercells, or squall lines. Other types of flash floods can occur from dam or levee failures.

Source: National Weather Service

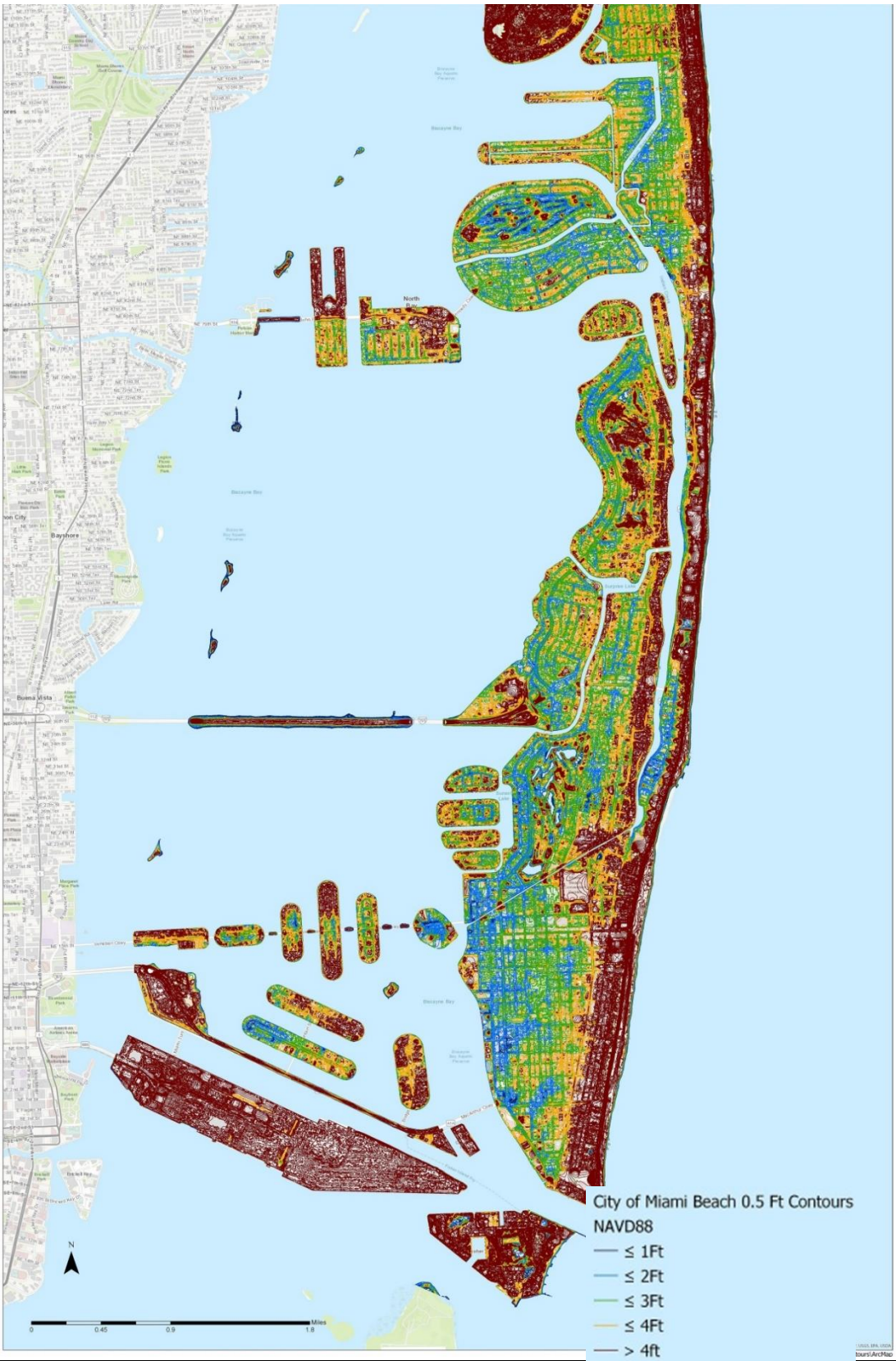
Most of the City of Miami Beach is susceptible to localized flooding, particularly during the rainy season of June through October. The mean elevation of the City of Miami Beach is relatively flat. The City's flat terrain causes extensive ponding due to the lack of elevation gradients to facilitate run-off.

To combat flooding, Miami Beach has launched a $500 million project that's begun installing as many as 80 pump stations throughout the city. In addition, more roads on the island's low-lying western edge will be rebuilt higher. The City's Stormwater Master Plan outlines measures the City is taking to combat damage from stormwater.

In the City of Miami Beach, serious flooding can occur near bodies of water and canals due to poor percolation rates, low elevations and the high water table. After heavy periods of rain, flooding in low lying areas can cause isolation of residences and businesses, damage to roadways and utilities, contamination of water supplies, and an interruption of essential access and emergency services. Urban areas can greatly affect the natural drainage patterns. Increased amounts of pavement also reduce the ability for rainwater to be absorbed, increasing the volume of runoff. Precipitation from a heavy rain can cause urban flooding. For example, the June 5, 2009 event dumped nine inches of rain in less than three hours in Miami Beach and led to severe flooding.

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Figure 10: City of Miami Beach Elevation



10.1.7 Saltwater Intrusion

Saltwater intrusion is a continuous problem that has been occurring ever since the Everglades were drained to provide dry land for urban development and agriculture. Long periods of drought and storm surge inundation are hazards that have been attributed to increases in saltwater intrusion. It poses a threat to the drinking water supply and requires close coordination of local agencies to continuously monitor intrusion, determine appropriate pumping rates and the coordination with South Florida Water Management District for maintenance of ground water levels.

According to the United States Geological Survey (USGS), saltwater intrusion is a generic term referring to an influx of saltwater through various pathways into an aquifer. The South Florida Water Management District defines it as chloride concentrations exceeding drinking water standards of 250 mg/1.36 Saltwater Intrusion is a major threat to the freshwater resources of the coastal areas in southeastern Florida.

There are three primary mechanisms by which saltwater contaminates the freshwater reservoir in the unconfined, surficial aquifers of the region: (1) encroachment of saltwater from the ocean along the base of the aquifer; (2) infiltration of saltwater from coastal saltwater mangrove marshes: and (3) the flow of saltwater inland through canals where it leaked into the aquifer. Per the USGS paper referenced below, “Saltwater intrusion of the Biscayne aquifer began when the Everglades were drained to provide dry land for urban development and agriculture.”

There is concern that saltwater intrusion can threaten the coastal drinking water supply well fields. Saltwater intrusion can also displace the fresh groundwater thereby impacting the water-table elevations in urban areas levels that could increase localized flooding. Shallow-water marine organisms are very sensitive to environmental changes in salinity, temperature, nutrient input, and dis-solved oxygen. Temporal and spatial salinity patterns in Biscayne Bay have profoundly affected the marine ecosystem caused by water-management driven changes in surface and ground-water discharge. In addition to those changes caused by natural events, long-term change in land and water uses during the 20th century in the bay watershed contributed greatly to the deterioration of marine conditions. Water quality has been greatly degraded by increased nutrient loads, trace metals, and other pollutants (http://sofia.usgs.gov/publications/circular/1275/changebb.html).

10.1.8 Sea Level Rise

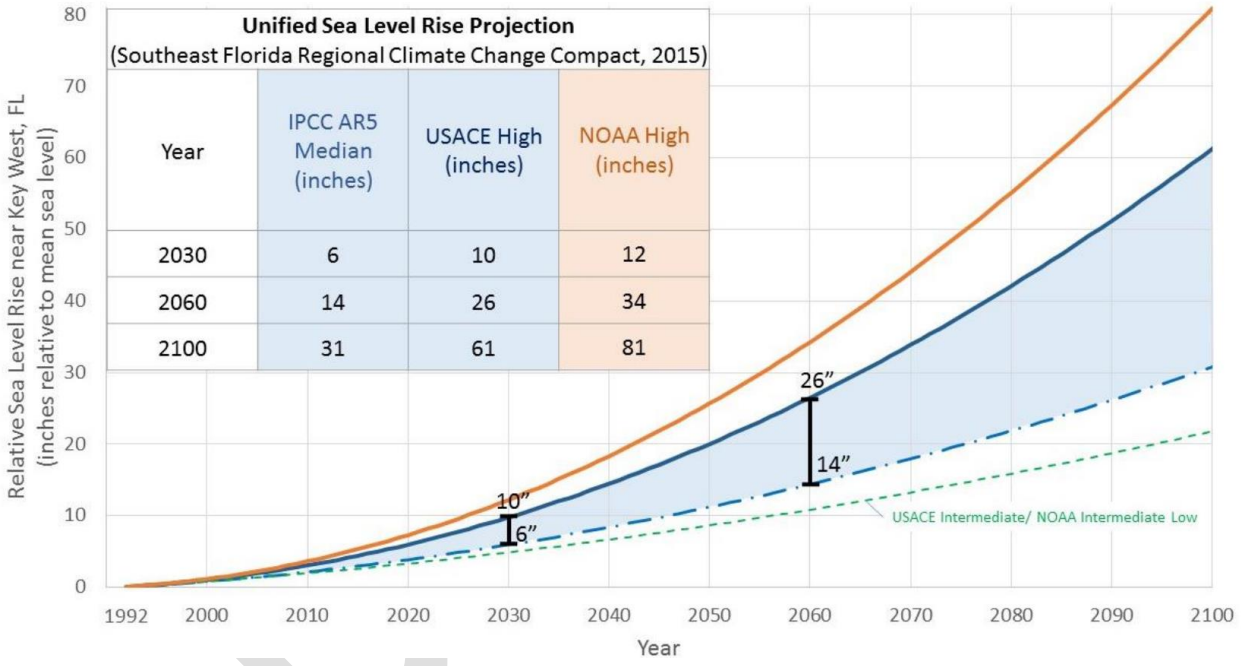
Sea Level Rise refers to the increase in the currently observed average Global Sea Level Trend. This increase is primarily attributed to changes in ocean volume, which in turn are due to three main impacts stemming from changes in global climate:

- **Thermal Expansion**: As with all water, when the ocean heats up, it expands. About 50% of the sea level rise in the past 100 years is because the ocean is warmer, and therefore takes up more space.

- **Glacier and Polar Ice Cap Melting**: Although glaciers and polar ice caps naturally melt a little each summer, they usually regain lost area during the winter. However, warmer winters have meant less opportunity to regrow this ice, resulting in more melted water remaining in the oceans, contributing to sea level rise.
- **Greenland and West Antarctic Ice Loss**: Similar to what is happening with glaciers and the polar ice cap, the huge ice sheets that cover Greenland and Antarctica are melting.

Short, mid, and long term projections have been adopted by the City for use in planning purposes. This Unified Sea Level Rise projection for Southeast Florida was developed by the Southeast Florida Regional Climate Change Compact (the Compact), and projects the anticipated range of sea level rise for the region from 1992 to 2100 (Figure 9, an excerpt from the 2015 Compact Unified Sea Level Rise Projection report).

Figure 11: Unified Sea Level Rise Projection



These projections are referenced to mean sea level at the Key West tide gauge. The projection includes three global curves adapted for regional application: the median of the IPCC AR5 RCP8.5 scenario as the lowest boundary (blue dashed curve), the USACE High curve as the upper boundary for the short term for use until 2060 (solid blue line), and the NOAA High curve as the uppermost boundary for medium and long term use (orange solid curve). The incorporated table lists the projection values at years 2030, 2060 and 2100. The USACE Intermediate or NOAA Intermediate Low curve is displayed on the figure for reference (green dashed curve). This scenario would require significant reductions in greenhouse gas emissions in order to be plausible and does not reflect current emissions trends.

Sea level rise is likely to increase coastal flooding during astronomical high tides and storm surge events. Rising seas will also likely impact the ability of the canals and low lying areas

to drain standing water after rainfall events and impact the ground water elevation. Gravity based outfalls within the City that lie below sea level have already seen impacts when salt water flows up through the outfall system into the streets. It is estimated that the total number of acres within Urban Miami-Dade to be impacted by sea level rise for a 1 foot scenario is 121,378 acres (12%), for 2 foot 150,142 acres (16%) and for the 3 foot scenario it could be 168,896 acres (18%) of the county (Analysis of Vulnerability of Southeast Florida to Sea Level Rise: http://www.southeastfloridaclimatecompact.org/wp-content/uploads/2014/09/vulnerability-assessment.pdf).

The City is experiencing the effects of sea level rise during annual king tides events. The king tide is the highest predicted high tide of the year occurring once or twice a year, and is above the highest water level reached at high tide on an average day (http://www.epa.gov/cre/king-tides-and-climate-change). Current water levels seen during king tide events will become the new normal water level during daily high tides. Both the built environment (critical infrastructure, key resources, and building stock) and natural environment are vulnerable to sea level rise and though some preliminary mapping shows southern portions of the county at highest risk there is risk to other portions as well. Miami Beach and other coastal communities have already begun to experience sunny day flooding in relation to high and king tides that limit the gravitational drainage that drains to the bay. Some recent incidents include:

- **2017** – The October king tides coincided with heavy rainfall and a strong easterly wind, which enhanced the effects of the event. This triggered a Coastal Flood Advisory from October 2nd through the 9th. Through this period, the Virginia Key tide gauge recorded high tides between 0.5 to 1.4 feet above predicted. Areas throughout Miami Beach and City of Miami flooded and reports of stalled vehicles and water entering businesses were recorded. The highest tide recorded for this event was 4.3 feet on October 5th.
- **2015** – Multiple communities along the coast of Miami-Dade were affected by the king tides on September and October. The king tides that occurred on September 27th – 28th coincided with the annual Supermoon, when the moon is closest to Earth, resulting in higher than predicted tides. South Florida was under a Coastal Flood Advisory until the 28th. Areas of Miami Beach had ankle-deep water and lead to the closure of Indian Creek Drive between 40 and 29 street several times, as reported in the Miami Herald article (http://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article36784707.html). A Coastal Flood Advisory was also in effect for all of Miami-Dade County from October 27th – 28th. Throughout this period, the tides were between 0.7 to 1.0 feet above the predicted.

10.1.9 Severe Storms

A storm is considered severe if it produces a tornado, winds of 50 knots (58 mph) or greater, and/or hail of an inch in diameter or greater. From 1950 through 2017, there have been 473 severe storm related events reported in Miami-Dade (averaging about five

occurrences per year). Over $209M in damages have been recorded during this same time period.

Florida is one of the most thunderstorm prone states. Thunderstorms provide rainfall that is generally beneficial; however, there is often the associated damage from lightning, wind and flooding. High winds from thunderstorms can cause damage to structures and lightning can cause fires and disable electrical power equipment.

Florida is the most lightning prone state. Florida averages about 1.4 million lightning strikes a year. Four hundred and sixty-eight deaths occurred in Florida due to lightning from 1959 to 2013. On average, 73 people are killed each year by lightning in the United States. About 9 are killed in Florida each year.

10.1.10 TORNADOES

Florida ranks fourth in the United States in the number of tornado occurrences, and considering tornadoes per square mile, Florida is first in the nation. During the period 1959 - 1995, tornadoes killed 82 Floridians, injured 2,562 and caused approximately $535,000,000 in property damage.

Tornadoes in Florida are difficult to predict and appear with little or no warning. Instantaneous destruction may occur when a funnel cloud touches down over land and becomes a tornado. When a funnel cloud touches down over water, it is called a waterspout. Most Florida tornadoes are small, short-lived and only touch the ground for brief periods of time. They cause localized destruction which is difficult to protect against. Downbursts accompanying thunderstorms can also cause damage similar to that of a tornado.

Table 13: Enhanced Fujita-Pearson Scale for Tornado Damage

Enhanced Fujita-Pearson Scale For Tornado Damage			
EF-Scale	Damage	Winds (mph)	Description
EF-0	Minor	65-85	Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over
EF-1	Moderate	86-110	Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken
EF-2	Considerable	111-135	Roofs torn off from well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.

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Enhanced Fujita-Pearson Scale For Tornado Damage			
EF-Scale	Damage	Winds (mph)	Description
EF-3	Severe	136-165	Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations are badly damaged.
EF-4	Devastating	166-200	Well-constructed and whole frame houses completely leveled; cars and other large objects thrown and small missiles generated.
EF-5	Incredible	Over 200	Strong-framed, well-built houses leveled off foundations are swept away; steel-reinforced concrete structures are critically damaged; tall buildings collapse or have severe structural deformations; some cars, trucks, and train cars can be thrown approximately 1 mile (1.6 km).

10.1.11 TROPICAL CYCLONES

A hurricane is a type of tropical cyclone, which is a generic term for a low-pressure system that generally forms in the tropics and is accompanied by both thunderstorms and, in the Northern Hemisphere, a counterclockwise circulation of winds near the earth's surface.

Tropical cyclones are classified as follows:

- Tropical Depression - An organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 38 mph or less. A tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) is 38 mph or less.
- Tropical Storm - An organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39-73 mph. A tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) ranges from 39 mph to 73 mph.
- Hurricane - An intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph or higher.

Southeast Florida has experienced 37 hurricanes between 1994 and 2017. Eleven of these storms have been “major hurricanes” (Category 3 or above). As of the writing of this updated plan, the last major storm to affect the City of Miami Beach was Hurricane Irma, which made landfall in the region on September 10th, 2017.

The City of Miami Beach’s low and flat barrier island topography increases risk associated with an evacuation due to the arrival of a hurricane. Over 91,564 coastal residents would

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need to be evacuated, depending on the intensity and potential impact of the storm. The successful evacuation of the City's over 92,000 residents, in addition to visitors is achievable, however, factors such as landfall and intensity of the hurricane require technology to assist in gauging clearance time. In addition, clearance time must be considered for surrounding communities. The clearance time becomes longer if the size of the storm, or its predicted landfall, requires the evacuation of adjacent communities, particularly Broward or Monroe Counties. The problems that arise from merging the evacuees from Monroe, Miami-Dade and Broward Counties may extend clearance times beyond reasonable limits. As a result, City of Miami Beach residents are discouraged from evacuating out of the Miami-Dade County unless they are utilizing air transportation or evacuate very early.

The threat from storm surge represents a serious hazard to the City of Miami Beach. During Hurricane Andrew in 1992, record high flooding occurred due to 17 feet of storm surge. In addition, flooding due to torrential rainfall (inundation) poses a serious threat to the City of Miami Beach.

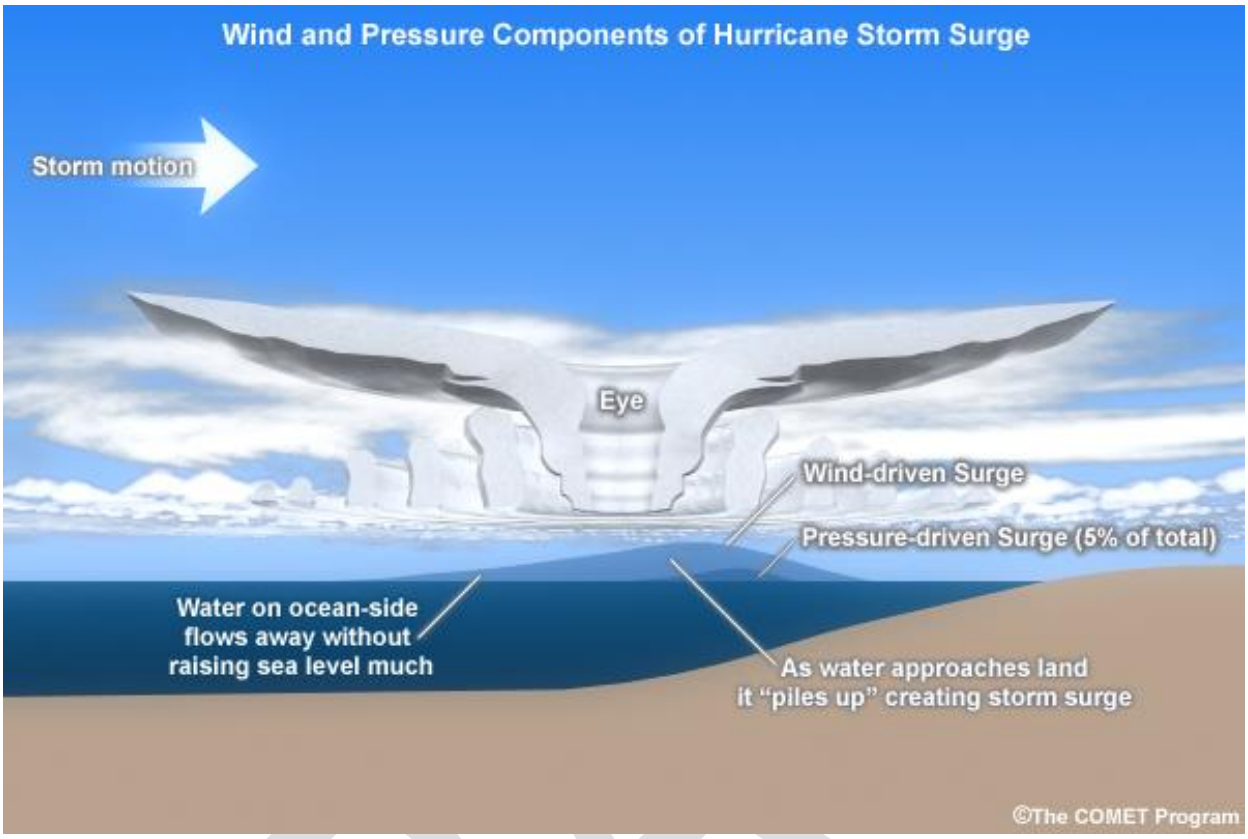
Pre-landfall hazards associated with a hurricane also pose a significant threat to a successful evacuation. Residents have a tendency to delay evacuation until the last minute which results in overflowing roadways and traffic jams. Torrential rains and tropical storm force winds associated with the outer bands of a hurricane frequently render evacuation routes impassable long before the predicted landfall of the storm. In accordance with a wind effects report distributed by the Florida Institute of Technology, Tropical Storm Force Winds (TSFW) can down trees and power lines, blow out windows, blow down signs, cause flying debris, structural collapse and cause vehicles to overturn and deviate from their course.

The potential for property damage resulting from a major hurricane represents one of the City of Miami Beach's most serious threats. A category 5 hurricane striking in the City of Miami Beach could put more than 222,000 citizens and visitors at risk and could easily result in losses of such proportions that the financial health of the City of Miami Beach and many businesses in the private sector would be placed in jeopardy.

10.1.11.1 MAJOR HAZARDS PRODUCED BY A HURRICANE OR TROPICAL STORM

- Storm Surge: The greatest potential for loss of life related to a hurricane is from the storm surge. Storm surge is an abnormal rise of water generated by a storm, over and above the predicted astronomical high tides. Storm surge should not be confused with storm tide. In the City of Miami Beach, the threat of storm surge represents a serious hazard. Miami-Dade Emergency Management has identified Storm Surge Planning Zones in areas where storm surge poses the greatest threat. Storm surge is the primary reason why City of Miami Beach residents are asked to evacuate prior to a hurricane event. For further information visit the following websites:
    - http://slosh.nws.noaa.gov/slosh/index.php#intro
    - http://www/mjc/mpaa/gpv/surge/momAvail.php

Figure 12: Wind and Pressure Components of Storm Surge



Source: NHC http://www.nhc.noaa.gov/surge/images/surgebulge

Storm surge can create flooding that can destroy building and carry debris miles inland, into canals and rivers, the intercostal waterways and out to sea. The water can also pool in low lying areas impeding response and recovery activities. Damages associated with storm surge include but are not limited to:

- Extreme flooding in coastal areas
- Inundation along rivers and canals
- Beach erosion
- Undermining of foundations of structures or roadways along the coastline (erosion or scour)
- Severely damaged marinas and boats, especially in confined harbors and rivers
- Sunken vessels or underwater hazards in navigable waterways

Storm tide is defined as the water level rise due to the combination of storm surge and the astronomical tide. This rise in water level can cause extreme flooding in coastal areas particularly when storm surge coincides with normal high tide, resulting in storm tides reaching up to 20 feet or more in some cases.

- High Winds - The high winds of a hurricane also present significant dangers to a community. This hazard especially applies to structures unable to withstand the stress and uplift forces from hurricane force winds (sustained winds of 74 miles per hour or higher). Structures most vulnerable to hurricane force winds are mobile homes and substandard housing. Hurricane winds also create hazardous conditions from flying debris.

  Winds associated with a tropical cyclone can also push water around the ocean, effectively piling water up along the coast, which, when coupled with storm surge and/or high tide, can increase the danger from flooding. The Saffir-Simpson Hurricane Wind Scale was first developed in the early 1970s to categorize hurricanes by intensity. The scale used to include storm surge projections and central pressure by category of storm, but it was determined that there was not a direct correlation between wind speed, storm surge heights and central pressure.

Table 14: Saffir Simpson Hurricane Wind Scale

Category	Wind Speed (mph)
5	≥156
4	131-155
3	111-130
2	96-110
1	74-95
Tropical Storm	39-73
Tropical Depression	0-38

- Rainfall - Rainfall varies greatly from one hurricane to the next. Size, forward speed and other meteorological factors may affect the amount of rainfall associated with a particular storm. Areas along bodies of water and low lying areas may be especially vulnerable to flooding. Rainfall may continue to be heavy after a storm loses hurricane status. The rainfall associated with a hurricane averages 6-12 inches, with sometimes higher amounts.
- Tornadoes - Tornadoes are most likely to occur in the right-front quadrant of the hurricane but are also often found elsewhere embedded in the rain bands, well away from the center of the hurricane. Some hurricanes seem to produce no tornadoes, while others develop multiple ones. The effects of tornadoes, added to the larger area of hurricane-force winds, can produce substantial damage.

  Currently, there is no way to predict exactly which storms will spawn tornadoes or where they will touch down. The new Doppler radar systems have greatly improved the forecaster's warning capability, but the technology usually provides lead times

from only a few minutes up to about 30 minutes. Consequently, preparedness is critical.

10.2 Technological Hazards

10.2.1 Hazardous Materials

The City does not have large hazardous materials sites within the jurisdiction; however, there are a number of small facilities which do store hazardous materials (gasoline, diesel, chemical agents for archive preservation, etc.) on their property, which includes fuel storage tanks. These facilities are listed on the Critical Facilities list, updated annually and submitted to the Miami-Dade County Office of Emergency Management (OEM). The City runs and maintains 47 fuel storage tanks, located at various City facilities (fuel tanks and private gas stations) by way of Haz-Mat transportation.

10.2.2 Coastal Oil Spill

An oil spill with the potential of landfall along the shoreline within the City would create an impact for the environment and local economy of the City. The impacts of an oil spill are dictated by the ultimate severity of the incident and the City response will be graduated to address the actual severity experienced.

The City of Miami Beach will take sustained actions to reduce or eliminate the risk to oil spill hazards and its effects. The City will use available assets and resources to ensure a proactive response and contracted resources to supplement City resources and technical expertise.

On April 20, 2010, an explosion occurred on the semisubmersible drilling platform Deepwater Horizon during deep-water drilling activities on the outer continental shelf southeast of the Mississippi River Bird's-Foot Delta. Two days later, as fire-fighting activities continued, the Deepwater Horizon sank into the Gulf of Mexico. Initially, it was estimated that the damaged well was leaking raw petroleum at an estimated 5,000 barrels (approximately 210,000 gallons) per day into the Northern Gulf. Subsequently, it has been determined the oil leak was significantly larger than the 5,000 barrel per day estimate. According to BP, the well had the capacity to produce a maximum of 110,000 to 164,000 barrels per day. The spill threatened fisheries, tourism, and the habitat of hundreds of bird species. The oil spill caused massive damage to the fragile ecosystem of the gulf coast and waters. Some estimates of the spill make this the largest oil spill ever in the Gulf of Mexico and US history. Oil washed ashore on beaches and sensitive wetlands in Louisiana, Mississippi, Alabama, and northwest Florida.

10.2.3 Critical Infrastructure Disruption

The potential exists for disruptions to electrical power, gas pipelines, or other segments of the infrastructure. Also, disruptions to computer systems can occur through accidental or intentional acts (i.e. cyber terrorism).

A major electrical power failure is defined as a failure of the electrical distribution system that will exceeds 24 hours in duration and affect greater than 33% of the geographical

area of the City. Electrical distribution systems can be interrupted for a number of reasons, but those that have historically been the main cause are high winds, severe thunderstorms and winter storms. A prolonged major electrical distribution system failure during the summer, accompanied by high temperatures, can have dramatic effects on the population of the City of Miami Beach.

10.2.4 CYBERATTACK

Cyberattack is defined as a malicious computer-to-computer attack through cyberspace that undermines the confidentiality, integrity, or availability of a computer (or network), data on that computer, or processes and systems controlled by that computer. National Security Presidential Directive 54/Homeland Security Presidential Directive 23 (NSPD-54/HSPD¬ 23) defines cyberspace as the interdependent network of information technology infrastructures, and includes the Internet, telecommunications networks, computer systems, and embedded processors and controllers in critical industries.

Threats to cyber space are regarded as one of the most serious economic and national security challenges in this day in age for the United States. As the Director of National Intelligence (DNI) recently testified before Congress, “the growing connectivity between information systems, the Internet, and other infrastructures creates opportunities for attackers to disrupt telecommunications, electrical power, energy pipelines, refineries, financial networks, and other critical infrastructures.

The duration of a cyberattack is dependent on the complexity of the attack, how widespread it is, how quickly the attack is detected, and the resources available to aid in restoring the system. One of the difficulties of malicious cyber activity is that it could come from virtually anyone, virtually anywhere. The following tables summarize the common types and sources of cyberthreats:

Table 15: Common Types of Cyber Attacks

Type of Attack	Description
Botnet	A collection of compromised machines (bots) under (unified) control of an attacker (botmaster).
Denial of service	A method of attack from a single source that denies system access to legitimate users by overwhelming the target computer with messages and blocking legitimate traffic. It can prevent a system from being able to exchange data with other systems or use the Internet.
Distributed denial of service	A variant of the denial of service attack that uses a coordinated attack from a distributed system of computers rather than from a single source. It often makes use of worms to spread to multiple computers that can then attack the target.
Exploit tools	Publicly available and sophisticated tools that intruders of various skill levels can use to determine vulnerabilities and gain entry into targeted systems.

Type of Attack	Description
Logic bombs	A form of sabotage in which a programmer inserts code that causes the program to perform a destructive action when some triggering event occurs, such as terminating the programmer's employment.
Phishing	The creation and use of emails and websites designed to look like those of well-known legitimate businesses, financial institutions, and government agencies in order to deceive Internet users into disclosing their personal data, such as bank and financial account information and passwords. Phishers use or sell this information for criminal purposes, such as identity theft and fraud.
Sniffer	Also knows as packet sniffer. A program that intercepts routed data and examines each packet in search of specified information, such as passwords transmitted in clear text.
Trojan horse	A computer program that conceals harmful code. A Trojan horse usually masquerades as a useful program that a user would wish to execute.
Virus	A program that infects computer files, usually executable programs, by inserting a copy of itself into the file. These copies are usually executed when the infected file is loaded into memory, allowing the virus to infect other files. Unlike the computer worm, a virus requires human involvement (usually unwitting) to propagate.
War dialing	Simple programs that dial consecutive telephone numbers looking for modems.
War driving	A method of gaining entry into wireless computer networks using a laptop, antennas, and a wireless network adaptor that involves patrolling locations to gain unauthorized access.
Worm	An independent computer program that reproduces by copying itself from one system to another across a network. Unlike computer viruses, worms do not require human involvement to propagate.

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Table 16: Common Sources of Cybersecurity Threats

Threat	Description
Bot-network operators	Bot-network operators are hackers; however, instead of breaking into systems for the challenge or bragging rights, they take over multiple systems in order to coordinate attacks and to distribute phishing schemes, spam, and malware attacks. The services of these networks are sometimes made available on underground markets (e.g., purchasing a denial-of-service attack, servers to relay spam or phishing attacks, etc.).
Criminal groups	Criminal groups seek to attack systems for monetary gain; specifically, organized crime groups use spam, phishing, and spyware/malware to commit identity theft and online fraud. International corporate spies and organized crime organizations also pose a threat to the United States through their ability to conduct industrial espionage and large-scale monetary theft, and to hire or develop hacker talent.
Foreign intelligence services	Foreign intelligence services use cyber tools as part of their information-gathering and espionage activities; in addition, several nations are aggressively working to develop information warfare doctrine, programs, and capabilities. Such capabilities enable a single entity to have a significant and serious impact by disrupting the supply, communications, and economic infrastructures that support military power—impacts that could affect the daily lives of U.S. citizens across the country.
Hackers	Hackers break into networks for the thrill of the challenge or for bragging rights in the hacker community. While remote hacking once required a fair amount of skill or computer knowledge, hackers can now download attack scripts and protocols from the Internet and launch them against victim sites. Thus, while attack tools have become more sophisticated, they have also become easier to use. According to the Central Intelligence Agency, the large majority of hackers do not have the requisite expertise to threaten difficult targets such as critical U.S. networks; nevertheless, the worldwide population of hackers poses a relatively high threat of an isolated or brief disruption causing serious damage.
Insiders	The disgruntled organization insider is a principal source of computer crime. Insiders may not need a great deal of knowledge about computer intrusions because their knowledge of a target system often allows them to gain unrestricted access to cause damage to the system or to steal system data. The insider threat also includes outsourcing vendors as well as employees who accidentally introduce malware into systems.
Phishers	Individuals or small groups that execute phishing schemes in an attempt to steal identities or information for monetary gain. Phishers may also use spam and spyware/malware to accomplish their objectives.
Spammers	Individuals or organizations that distribute unsolicited email with hidden or false information in order to sell products, conduct phishing schemes, distribute spyware/malware, or attack organizations (e.g., denial of service).

Threat	Description
Spyware/ Malware authors	Individuals or organizations with malicious intent carry out attacks against users by producing and distributing spyware and malware. Several destructive computer viruses and worms have harmed files and hard drives, including the Melissa Macro Virus, the Explore.Zip worm, the CIH (Chernobyl) Virus, Nimda, Code Red, Slammer, and Blaster.
Cyberterrorists	Cyberterrorists seek to destroy, incapacitate, or exploit critical infrastructures in order to threaten national security; cause mass casualties, weaken economies, or target businesses; and/or damage public morale and confidence. Cyberterrorists may use phishing schemes or spyware/malware in order to generate funds or gather sensitive information.

As most day-to-day activities rely on the Internet in one aspect or another, any person or infrastructure is susceptible to cybersecurity threats. Energy pipelines, specifically U.S. natural gas pipelines, have been cited by DHS as targets of cyberattack. While information on these attacks is not publicly available knowledge, cyber security officials warn that, with sufficient access, a hacker could "manipulate pressure and other control system settings, potentially reaping explosions and other dangerous conditions." While cyber risks and threats are mainly thought of as not having specific locations, there are physical sites that would be impacted. Locations at risk could include government agencies, institutions of higher education, medical facilities, and various private sector entities.

Low-level cyber-attacks occur daily and sometimes hourly on governmental systems. Most of these attacks do not breach the City systems, however, there have been cases of minor breaches. Based on the growing sophistication and political climate, there is a high probability of future cyberattack events within the City of Miami Beach.

10.2.5 Major Transportation Vulnerabilities

The City of Miami Beach is located off the east coast of South Florida and is connected by bridges to mainland Miami. Major transportation methods include:

- **Air Service** – The City of Miami Beach is within close proximity to the Miami International Airport (MIA). MIA is located on 3,230 acres of land near downtown Miami, is operated by the Miami-Dade Aviation Department and is the property of Miami-Dade County government. Founded in 1928, MIA offers more flights to Latin America and the Caribbean than any other U.S. airport, is America's second-busiest airport for international passengers, boasts a lineup of over 100 air carriers and is the top U.S. airport for international freight. MIA is also the leading economic engine for Miami-Dade County and the state of Florida, generating business revenue of $33.7 billion annually and welcoming 70% of all international visitors to Florida. Since the City of Miami Beach is within the direct flight path of many commercial airline flights, the potential exists for a crash.

- **Highway Systems** – The City of Miami Beach has two major North-South arterial roadways, one of which is Collins Avenue, providing connectivity throughout the City's entirety and the other is Alton Road which provides access to the majority of the City. Other major arterials include four East-West roadways within the City of Miami Beach. There are four causeways that connect the City to the mainland. These roadways are SR A1A/5th Street, Dade Boulevard, SR 112/Arthur Godfrey Road/W 41st Street, and SR 934/ 71st Street. The rest of the major roadways within the City of Miami Beach are collectors. Most of them form a grid in the South Beach area, with Washington Avenue providing the most North-South connectivity and thus exhibiting large commercial activity around it.
- **Bridges** – Several bridges are located within the City of Miami Beach. Some include:
    - **The Collins Canal Bridge** – The Collins Canal Bridge is a concrete arch bridge over Collins Canal on FL 907. It has a span of 57.1 ft. More than 30,000 vehicles crossed the bridge daily in 2014. The Collins Canal Bridge was constructed in 1956 and rehabilitated in 1962.
    - **East Biscayne Bay Bridge** – The East Biscayne Bay Bridge is a pair of bascule bridges over East Biscayne Bay on FL 934. It has a total span of 1,028 ft. long. The East Biscayne Bay Bridge was built in 1973. The average daily traffic in 2015 was 14,750 vehicles per day.
    - **Holocaust Memorial Bridge** – The Holocaust Memorial Bridge is a slab bridge over Collins Canal on Meridian Avenue. The bridge was built in 2000. It has a span of 61 feet and had an average daily traffic rate of 10, 214 in 2014.
    - **Indian Creek Canal Bridge** – The Indian Creek Canal Bridge is a bascule bridge over Indian Creek Canal on 53rd Street. It was built in 1953 and has a total span of 74.5 feet. The Indian Creek Canal Bridge had an average of 28,500 daily vehicles in 2015.
    - **The Venetian Causeway Bridge** – The Venetian Causeway Bridge is a bascule bridge over Biscayne Bay on Venetian Causeway. The bridge was built in 1927 and has a total length of 303.5 feet. The average daily traffic flow was 20,400 in 2015.

10.2.6 Radiation Contamination

Federal authorities have established 10- and 50-mile Emergency Planning Zones as the basis for planning to protect the public from exposure to radiation in the unlikely event of an accident at a nuclear power plant. For areas within 10 miles of a nuclear power plant the planning zone is called the Exposure Path Zone (EPZ), and for areas within 10 to 50 miles of a nuclear power plant the planning zone is called the Ingestion Path Zone (IPZ).

The Turkey Point Nuclear Power Plant is located in the southeastern portion of Miami-Dade County adjacent to Biscayne Bay and approximately 10 miles south of Cutler Ridge

at 9700 SW 344th Street, Homestead, Florida 33035. The State supports Miami-Dade County's response and recovery activities as they pertain to Turkey Point. The county is the local entity in charge of response for events at the power plant.

Planning for the 50-mile IPZ includes identifying and monitoring crops that may be consumed by humans or animals, and dairy and/or drinking water facilities or supplies that are located in an open environment that could be exposed to radioactive fallout.

An accident or incident at a nuclear power plant is classified in one of four ways:

- Unusual Event - minor incident such as severe weather.
- Alert - minor incident that could affect reactor safety.
- Site Area Emergency - more serious, reactor could be leaking.
- General Emergency - most severe, radiation release off site possible.

The public within these zones could be notified of such events by a variety of methods, including:

- Radio
- Television
- Door-to-door Notification
- Public Safety Vehicle
- Marine interests via Marine VHF radio

For additional safety planning information for neighbors of Florida Power and Light nuclear power plants, visit their web site at http://www.metro-dade.com/oem/turkeypoint.asp.

The area directly around Turkey Point Power Plant is most vulnerable to nuclear power plant releases in the county, however the entire county would likely be impacted either directly (evacuated, illness) or indirectly (fear, uncertainty). Nine of the ten areas within the ten-mile Emergency Planning Zone (EPZ) are inside Miami-Dade County. All of Miami-Dade County is within the 50-mile Emergency Planning Zone.

10.3 Human-Caused Hazards

10.3.1 Terrorism

The threat of terrorism, whether domestic or foreign-inspired, reaches every community and supporting infrastructure throughout the United States. A potential variable to be considered when addressing the vulnerability to terrorism events is the demographics of a community. A predominant factor in historic and recent terrorist events is the targeting of defenseless and unaware victims in a densely populated environment, enhancing the effectiveness and impact of the terrorist attack. A secondary factor in a terrorist's target selection may be a specific population within the selected community, defined by race, religion or other ethnicity. Although the City of Miami Beach enjoys a wide ethnic base, enjoying a shared and popular eclectic atmosphere, the diverse components of this

population often gather in specific groups to celebrate their cultural and religious identity. These gatherings, whether in synagogues, churches or specific community centers, present an opportunity for terrorists to create a mass casualty event within a targeted population. Consideration should be given to the various ever-evolving terroristic threat levels facing specific religious and ethnic population subsets within the City of Miami Beach as well as opportunities to cause mass casualty events during the frequent large pedestrian gatherings.

The City of Miami Beach provides the initial emergency response to acts of terrorism within the community, followed by the Federal Bureau of Investigation (FBI) and supporting elements of related federal agencies providing immediate response and appropriate investigation.

The attack on the World Trade Center in 1993, Oklahoma City in 1995, the Attack on America on September 11, 2001, Pulse Nightclub attack in 2016, 2017 Las Vegas shooting, and 2018 Parkland Shooting have forever changed the face of terrorism in America. While these events did not impact Miami Beach directly, they impacted actions and operations of public safety agencies, travel, alternative lifestyles, economic health, and other outcomes all over the world.

- **World Trade Center, 1993 –** On February 26, 1993, a truck bomb was detonated below the North Tower of the World Trade Center in New York City. Six people were killed, including five Port Authority employees, and another 1,042 people were injured.
- **Oklahoma City, 1995 –** On April 19, 1995, a truck bomb explosion outside the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma left 168 people dead and hundreds more injured. The blast was set off by anti-government militant Timothy McVeigh, who was executed in 2001.
- **September 11, 2001 –** On September 11, 2001, 19 militants associated with the Islamic extremist group Al-Qaeda hijacked four commercial airplanes and carried out suicide attacks against targets in the United States. Two of the planes were flown into the towers of the World Trade Center in New York City, a third plane hit the Pentagon, just outside Washington, D.C. and the fourth plane crashed in a field in Pennsylvania. The attacks resulted in extensive death and destruction. Over 3,000 people were killed during the attacks in New York City and Washington, D.C., including more than 400 police officers and firefighters. All 44 people aboard the plane that crashed in Pennsylvania were also among the casualties.

10.3.2 Active Shooter

The United States Department of Homeland Security defines an active shooter as "an individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms and there is no pattern or method to their selection of victims. Active Shooter incidents could involve a wide variety of materials or actions, or combinations of materials and actions. These could range from uncomplicated incidents impacting relatively small areas, to highly complex incidents with

very widespread physical or economic consequence. The response to such an incident would require specialized personnel and resources. Below are examples of active shooter incidents:

- **Sandy Hook Elementary School Shooting in Newtown, CT -** On December 14, 2012, in Newtown, Connecticut, United States, when 20-year-old Adam Lanza shot and killed 26 people. The incident is the deadliest mass shooting at an elementary school in U.S. history, and the fourth-deadliest mass shooting overall.
- **Pulse Nightclub, Orlando, FL Shooting –** On June 12, 2016, Omar Mateen killed 49 people and wounded 53 others in a terrorist attack inside Pulse, a gay nightclub in Orlando, FL. It was the both the deadliest mass shooting by a single shooter and the deadliest incident of violence against Lesbian, Gay, Bisexual and Transgender (LGBT) people in United States history. In a 911 call shortly after the shooting began, Mateen swore allegiance to the leader of Islamic State of Iraq and the Levant (ISIL), Abu Bakr al-Baghdadi.
- **2017 Las Vegas Shooting -** On October 1, 2017, a gunman opened fire on a crowd of concertgoers at the Route 91 Harvest music festival on the Las Vegas Strip in Nevada. Perpetrator Stephen Paddock, 64, of Mesquite, Nevada, fired more than 1,100 rounds from his suite on the 32nd floor of the nearby Mandalay Bay hotel killing 58 people and leaving 851 injured from gunfire and the resulting panic. The shooting occurred between 10:05 and 10:15 p.m. PDT; about an hour later Paddock was found dead in his room from a self-inflicted gunshot wound. His motive remains unknown.
- **Marjory Stoneman Douglas High School Shooting** - On February 14, 2018, Nikolas Cruz opened fire at Marjory Stoneman Douglas High School in Parkland, Florida, killing seventeen students and staff members and injuring seventeen others. It is the deadliest shooting at a high school in United States history surpassing the Columbine High School massacre which took place 19 years earlier.

10.3.3 Civil Disturbances

Civil Disturbance is recognized as an eruption of pre-planned or spontaneous violence, arising from a protest or organized expression of disenchantment by a homogeneous or diverse group, responding to an event or advancing a cause.

The City of Miami Beach has a multi-ethnic population originating from countries with widely divergent political systems, religious beliefs, and educational backgrounds. Civil disturbances must be anticipated and expected. The City of Miami Beach Police Department has the primary responsibility for gathering intelligence and maintaining law and order within this arena and maintains the Standard Operating Procedure (SOP) that outlines the coordination and handling of responses to civil disturbances.

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10.3.4 Mass Migration

Mass migration refers to the migration of a large group of people from one geographical area to another. Mass migration is distinguished from individual or small-scale migration; it is also different from seasonal migration, which occurs on a regular basis. Mass migration is not always voluntary, sometimes including forced migration and refugees.

The control of immigration into the United States is the responsibility of the United States Department of Homeland Security (DHS). The DHS has created the OPLAN Vigilant Sentry Plan. OPLAN Vigilant Sentry describes the basic organization and structure by which Homeland Security Task Force – Southeast (HSTF-SE) will deploy resources and direct multiagency operations to address a potential and full-scale mass migration event.

Miami-Dade County has a history of mass immigration from the Caribbean basin, particularly Cuba and Haiti. A large uncontrolled influx of immigrants has the potential of significantly disrupting the social and economic stability of the City of Miami Beach by overwhelming the delivery of essential services such as medical response and public safety. Armed violence abroad may also precipitate spontaneous mass immigration to South Florida. While the federal government has the primary responsibility for assuming control of mass immigration emergencies, Miami-Dade County may have to provide humanitarian effort including: shelter, food, water, medical, and other social services.

10.3.5 Special Events

Multiple major and special events take place within the City every year. Large public events can be the targets of terrorist activity or civil disturbances. The City of Miami Beach and surrounding areas host several professional sports teams. Miami Beach hosts many traditional events specific to the region.

Major attractions in the area include: South Beach, Ocean Drive, Lincoln Road Pedestrian Mall, Collins and Washington Avenues, Bass Museum of Art, the City's various historic neighborhoods, upscale shopping centers, and Art Deco buildings.

Miami Beach hosts many large events and holiday activities including Memorial Day Weekend. This holiday brings in more than 100,000 guest, visitors, and spectators on Miami Beach. As a result, Miami Beach has to enhance and increase staffing across departments to ensure resident and visitor safety and to protect quality of life and public welfare. Essential City employees work an excess of 12 hours each day throughout the weekend to combat the strain of the City's resources which include the City Management Team, as well as various City departments, including Parking, Code Compliance, Public Works, Sanitation, Tourism and Culture, Economic Development, Fire/Rescue, and the Police Department work to provide additional support and oversight to the city.

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