



April 18, 2017

Steve Martin, CFM
State Floodplain Manager
Florida Division of Emergency Management

RE: Floodplain Management Planning Committee Annual Progress Report

Dear Mr. Martin

The City of North Miami (the “City”) is submitting this Annual Progress Report (the “Report”) of our Floodplain Management Planning Committee (FMPC) review of the Miami-Dade County Local Mitigation Strategy (LMS) and repetitive loss analysis for Activity 510 for our Community Rating System (CRS) 2018 Annual Recertification. A copy of this letter will be distributed to the media and made available to the public; this letter will be forwarded as required through the City’s Public Information Officer, and a copy will be made available on the City’s website. The report will also be attached to a copy of the LMS for public review at the North Miami Public Library, located at 835 NE 132 Street, and will also be provided to the City of North Miami Mayor and City Council as the governing board.

Background

The purpose of the LMS is to develop a comprehensive approach to reducing flood hazards faced by all communities in the County. The LMS is reviewed and amended up to twice a year and is reviewed for the CRS program every 5 years. On March 14, 2017, via resolution 2017-R-20, the City adopted the Miami-Dade (LMS) to identify and prioritize the hazard mitigation grant program projects for inclusion in the local and statewide hazard mitigation strategy. Furthermore, the adoption of the resolution is consistent with the City’s Comprehensive Plan Policy 5A2.2. In 2017, during the CRS Cycle review process, the City of North Miami submitted the LMS plan for Activity 510 in lieu of the City’s 2014 Floodplain Management Plan (the “Plan”).

As required for Annual Recertification, the FMPC reviewed the LMS Action Plan items and repetitive loss area analysis and provided updates to maintain credit for the activity. The following are the Annual Progress Report responses:

Progress report items:

1. How can a copy of the original plan or area analysis report be obtained?

A copy of the original Miami-Dade County Local Mitigation Strategy and the repetitive loss area analysis and all subsequent updates to the plan can be found at the following locations:

- a. North Miami Community Planning & Development – 12400 NE 8th Avenue
- b. North Miami Library – 835 NE 132 Street
- c. North Miami Motor Pool – 1855 NE 142 Street
- d. North Miami Utility Operations Center – 1815 NE 150 Street



- e. Online at the North Miami Flood Protection page
<http://www.northmiamifl.gov/Departments/Publicworks/Floodplaininfo.aspx>

2. Describe how this evaluation report was prepared and how it was submitted to the governing body, released to the media, and made available to the public:

- a. In accordance with the North Miami Resolution 99-28, the purpose of the FMPC is to oversee the annual update of the Plan. Since the City is using the Miami-Dade LMS in lieu of the Plan, in support of Resolution 2017-R-20 the FMPC reviewed the LMS and repetitive loss area analysis.
- b. The evaluation report will be released to the media through the Public Information office.
- c. A copy of this Report will also be made available on-line through the City's website and attached to a copy of the LMS for public review at the North Miami Public Library, located at 835 NE 132 Street.

3. Provide a description of the implementation of each recommendation or action item in the action plan or area analysis report, including a statement on how the project was implemented or not implemented during the previous year:

Project 1: Flood Prevention and Mitigation: Drainage Basin 13

Stormwater Master Plan Priority Basin 13 includes two sub-basins in the Biscayne East system. The area is bounded by Biscayne Canal and NE Miami Ct., between NE 119th and NE 123rd Streets. While there currently exists a limited number of drainage structures in these two areas, they require critical updates including the installation of baffles and replacement of grates. The installation of additional structures with French Drain systems, as illustrated in the Plan's conceptual design, will prevent repetitive flooding, reduce damages to residential properties, and decrease the number of recurring insurance claims.

Budget: Estimated cost: \$500,000

Project type: Infrastructure

Timetable: Will be completed if funding becomes available.

*Status: **Not Implemented.** The City has not budgeted this project for the past fiscal year. The project has been taken off the LMS list due to potential funding from the State Legislature.*

Project 2: LMS 700 - Non-critical Facilities Hazard Mitigation

The City has identified seven of its buildings as non-critical facilities. These facilities support the restoration of essential city services after major storm events and other emergencies. Non-critical facilities include community centers (Griffing Adult Center, Gwen Margolis Community Center, Keystone Center, and Sunkist Grove Community Center), the Building Department, the Museum of Contemporary Art, and the Parks Operation Center. Non-critical buildings are used as staging facilities by city staff, FEMA, Red Cross, and other emergency response agencies. Non-critical city facilities currently



secure their windows and doors with plywood. Over the years, building officials and staff have researched various types of protection. The installation of a combination high impact/shatterproof windows, roll downs and/or hurricane proof screens in these facilities will reduce significantly the time, manpower and storage currently required to secure them.

*Budget: Estimated cost: \$400,000
Project type: Infrastructure
Timetable: Will be completed if funding becomes available.
Status: **Not Implemented.** The City has not budgeted for this project for the past fiscal year, but will continue to look for other funding opportunities.*

Project 3: LMS702 - Surge Resistance and Flood Mitigation at Keystone Point and Sans Souci – 2018

The eastern boundary of the City borders Biscayne Bay for approximately three miles. Keystone Point and Sans Souci subdivisions are located along this eastern shoreline. There are five canal ends in Sans Souci currently in good condition and there are twenty-three canal ends in Keystone Point that have been repaired. When these subdivisions were developed, these canal ends were constructed to prevent soil erosion. The canal ends were not designed as seawalls and their structural integrity was not considered at the time. In 1998, the City received a Federal Emergency Management Agency grant to reconstruct twenty-one of the twenty-eight seawalls. While two existing retaining walls do not need repairs, the remaining five retaining walls require reconstruction to ensure structural integrity in the event of storm-related tidal surges. Approximately 50 homes will be affected if the remaining retaining walls are damaged by a tidal surge. In addition, any surface or subterranean deterioration to the existing retaining walls will adversely impact the structural integrity of the swales directly behind the seawalls and subsequently damage underground utilities in close proximity to the retaining walls. This project will prevent repetitive flooding, reduce damages to residential properties, decrease the number of recurring insurance claims, and provide uninterrupted telephone, water and sanitary sewer services to residents.

*Budget: Estimated cost: \$500,000
Project type: Beach / Seawall
Timetable: Will be completed if funding becomes available.
Status: **Not Implemented.** The City applied for a Pre-Disaster Mitigation grant in 2017 for this project and is awaiting on a response notice from the Florida Division of Emergency Management. The City has not budgeted for this project for the past fiscal year, but will continue to look for other funding opportunities.*



Project 4: LMS 703 - Sanitary Sewer Backup

The City maintains and operates forty-five sanitary sewer lift stations. These lift stations, located throughout the City, vary in size and configuration and allow sanitary sewage to flow through a pressurized sewer main system. This sewer system infrastructure is monitored regularly to ensure proper function. In the event that any lift station ceases to operate due to power failure or malfunction, the entire system fails as required pressures cannot be maintained; sanitary sewage then backs up into the system, eventually entering homes as inflow/outflow pressures are reversed. More than half of the City's forty-five sanitary sewer lift stations have high priority needs for generators. Ten lift stations are constructed with the capability to house permanent stationary generators. Six of these ten lift stations currently have emergency backup generators permanently affixed to the facility. The remaining four lift stations will require emergency generator back up to be installed.

*Budget: Estimated cost: \$700,000
Project type: Equipment
Timetable: Will be completed if funding becomes available.
Status: **Not Implemented.** The City has not budgeted this project in the current fiscal year, however, the City will be applying for the 2018 Hazard Mitigation Grant through Miami-Dade County in order to try and fund the project.*

Project 5: LMS 704 - Safeguarding Availability of Potable Water

Six remote raw water wells provide water to the City's Winson Water Plant at Sunkist Grove and supply the water necessary to operate the water plant at full capacity. This project will provide emergency power to the wells. The emergency generators will ensure that the remote water wells remain operational during power outages caused by storm events, and that the Plant will operate at full capacity. This will provide an uninterrupted source of potable water for North Miami residents as well as residents in the surrounding water service areas. In addition, the generators will also ensure interconnectivity with other municipalities and service areas including the City of Opa Locka, the City of North Miami Beach and Miami-Dade County.

*Budget: Estimated cost: \$325,000
Project type: Infrastructure
Timetable: Will be completed if funding becomes available.
Status: **Not Implemented.** The City has not budgeted this project in the current fiscal year, however, the City will be applying for the 2018 Hazard Mitigation Grant through Miami-Dade County in order to try and fund the project.*



Project 6: LMS 707 - Emergency Portable Stormwater Pumps

The easternmost boundary of City borders Biscayne Bay for approximately 3 miles. There are several low-lying areas that flood during regular rainfall and major storm events. The City seeks funds to purchase four portable emergency pumps to assist in the discharge of stormwater runoff. These four portable pumps will be housed at the Utility Operation Center located near low-lying coastal areas to ensure a timely response. These portable stormwater pumps will help prevent repetitive flooding, reduce damages to residential properties, and decrease the number of recurring insurance claims.

Budget: Estimated cost: \$225,000

Project type: Equipment

Timetable: Will be completed if funding becomes available.

*Status: **Not Implemented.** The City has not budgeted this project for the past fiscal year, but will continue to look for other funding opportunities.*

Project 7: LMS 708 - Gravity Sewer Systems Improvements for Groundwater Infiltration Reduction

The City seeks funds to implement remedial protocols, namely sanitary sewer pipe lining and manhole rehabilitation to reduce groundwater infiltration into the sanitary sewer collection system. The project calls for lining the interior of existing sewer lines. Lining the system will significantly reduce the inflow and infiltration of ground water into the sewer collection system. This action, will reduce the total volume of water being treated at the Miami-Dade County Sewage Treatment Facility consequently reducing processing costs. In addition, this project will also reduce leakage of raw sewage from existing compromised lines into the environment, prevent groundwater contamination and ensure the public health, safety and general welfare of area residents.

Budget: Estimated cost: \$6,000,000

Project type: Infrastructure

Timetable: Will be completed if funding becomes available.

*Status: **Not Implemented.** The City has not budgeted this project in the current fiscal year, however, the City will be applying for the 2018 Hazard Mitigation Grant through Miami-Dade County in order to try and fund the project.*

Project 8: LMS 709 - Emergency Power for Water and Sewer Utility Operations Center

The City's Water and Sewer Utility Operations Center is not manned during major storm events; however, the Center must be operational immediately after an "all-clear" notice is issued. All water and sewer equipment, materials and supplies are stored at this location. In addition, repair crews are dispatched and monitored from the Center during storm events and other emergencies. The City seeks funds to install a stationary emergency generator at the Center.



Budget: Estimated cost: \$90,000
Project type: Equipment
Timetable: Will be completed if funding becomes available.
*Status: **Not Implemented.** The City has not budgeted this project in the current fiscal year, however, the City will be applying for the 2018 Hazard Mitigation Grant through Miami-Dade County in order to try and fund the project.*

Project 9: LMS 710 - Replacement Generator for Police Station

The current generator, which is 10 years old, supplies back up power for the City's Police Station. The Police Station is an integral part of the County's Emergency Management Divisional Response Plan. The City is one of seven municipalities identified as host cities (Division 2) housing a Divisional Emergency Operations Center and serving not only City residents but also residents from the Town of Bay Harbor Islands, the Village of Biscayne Park, the town of Surfside, Indian Creek Village and North Bay Village. The ability to operate and provide communications from a functional facility during manmade or natural disasters is of vital importance to the overall safety of the community and neighboring municipalities. The City seeks funds to replace the back-up generator at the Police Station.

Budget: Estimated cost: \$325,000
Project type: Equipment
Timetable: Will be completed if funding becomes available.
*Status: **Not Implemented.** The City has not budgeted this project for the past fiscal year, but will continue to look for other funding opportunities.*

Project 10: LMS 712 - Correct Water Infiltration at City Hall (EOC) Basement

Constructed in 1963, City Hall was designed to house a civil defense bomb shelter in the basement. Over the years, the need for a bomb shelter has become obsolete and the basement has been used for offices, classrooms, employee break rooms and storage space for department supplies. City records are also stored in the basement. Currently, the basement also contains office space for five municipalities that participate in the North Miami Divisional Emergency Operations Center. These municipalities house emergency response teams and are the link to the Miami-Dade EOC during natural disasters. Since the basement is below the natural water table, the structural integrity of the walls and flooring has diminished causing water intrusion. The walls and flooring should be sealed and possibly excavated and sealed along exterior walls. Correcting the flooding problem in the basement will ensure that vital facilities and staff are secure during major storm events.

Budget: Estimated cost: \$45,300
Project type: Infrastructure
Timetable: Will be completed if funding becomes available.
*Status: **Not Implemented.** The City has not budgeted this project for the past fiscal year, but will continue to look for other funding opportunities.*



Project 11: LMS 713 Replacement of U.P.S. for Police Station

The City is an integral part of Miami-Dade County's Emergency Divisional Response Plan, and is one of seven municipalities identified as host cities, serving the Town of Bay Harbor Islands, the Village of Biscayne Park, the Town of Surfside, and Indian Creek Village. The Divisional Emergency Operations Center (EOC) facility houses staff and provides emergency planning, communication, and information receipt and dissemination services. During manmade or natural disasters, the ability to operate and provide communications from a protected and safe facility is of vital importance to the overall safety of the community and neighboring municipalities. The current Uninterruptible Power Supply (UPS) provides power during power failures and safeguards all communications equipment, computers and other vital electrical equipment. The current UPS is over five years old; all batteries have reached the end of useful service life; and it is at its maximum capacity. The City seeks funds to replace the Uninterruptible Power Supply.

Budget: Estimated cost: \$80,000
Project type: Infrastructure
Timetable: Will be completed if funding becomes available.
Status: **Not Implemented.** The City has not budgeted this project for the past fiscal year, but will continue to look for other funding opportunities.

Project 12: LMS 714 - Utility Operation Center Surge Suppression System

The City maintains and operates forty-five sanitary sewer lift stations. Most lift stations are monitored from the City's Operation Center located at 1815 NE 150th Street through a supervisory control and data acquisition (SCADA) system. All SCADA information is routed electronically through a server located at City Hall and relayed to either the operation center or the lift stations by way of radio. The SCADA system is susceptible to power fluctuations and spikes that damage equipment and disrupt communication between the Operation Center, City Hall and subsequently the lift stations. Surge suppression equipment will protect the system against damaging power fluctuations. It will eliminate the need for new equipment purchases and reduce personnel costs to manually control lift stations during storm events.

Budget: Estimated cost: \$20,000
Project type: Infrastructure
Timetable: Will be completed if funding becomes available.
Status: **Not Implemented.** The City has not budgeted this project in the current fiscal year, however, the City will be applying for the 2018 Hazard Mitigation Grant through Miami-Dade County in order to try and fund the project.



4. Why items have not been completed

Due to lack of funding none of the LMS projects have been completed. Eleven of twelve projects remain on the LMS list. The Arch Creek Basin project was removed from the LMS list due to potential funding from the State Legislature. If the project is funded, it will be implemented, if not, the project maybe added back to the LMS list in the future. Staff is diligently applying for grants to fund the projects and has identified possible match funds for up 6 of the 11 projects in order to apply for the 2018 HMGP grant. If awarded the grants, the projects will be implemented and the status will be updated for the next Annual Reporting period.

5. Recommendations

Recommendations for the upcoming fiscal year include:

- Expand the “Only Rain Down the Drain” campaign;
- Provide additional forms of flood protection and hazard awareness outreach information;
- Continue to preserve spoil islands in their natural state;
- Continue to preserve existing mangroves and wetlands in natural state;
- Identify and prioritize stormwater system improvement projects for flood prone areas to provide a minimum 5-year flood level of service;
- Add low-impact development requirements into the Land Development Regulations; and
- Continue to research and apply for outside funding for capital improvement projects.

Repetitive Loss Area Analysis

On April 6, 2018 at a regularly scheduled public meeting, the FMPC reviewed the repetitive loss area analysis map¹ and analyzed the land conditions, flood zones, and previous storm and rain events that contributed to flooding in previous years and recommended the following strategies to mitigate flooding and protect properties:

Flood Mitigation

- *Staff should incorporate mandatory low-impact design standards to mitigate flooding in the Land Development Regulations for new construction and substantial additions.*
- *The City should refurbish swales in neighborhoods and prohibit parking in area to improve stormwater retention and drainage.*
- *The City should plant additional street tree to improve drainage.*
- *The City should increase emergency portable stormwater pumps to pump flooded roads after storms.*
- *The City should purchase repetitive loss properties so that properties can be used as open space drainage areas to mitigate flooding on adjacent properties.*

¹ Repetitive Loss Area (attached)



Flood Protection

- *The City and the FMPC should create an educational brochure and send it to property owners in flood prone areas. The brochure will include information and activities that property owners can do to mitigate property flooding (i.e. landscaping, bio-swales, rain gardens, rain barrels, permeable pavement, and structure elevation).*
- *Provide notice to these property owners about funding opportunities to protect or rehab their homes from flooding.*

Conclusion

The City is dedicated to protecting the community from flood hazards through education and mitigation. The LMS projects listed are capital improvement projects identified to mitigate flooding. As a result of limited budget, the City has been unable to fund the LMS projects; however, the City is continually seeking grants throughout the year to fund these projects. The FMPC reviewed the repetitive loss area analysis and recommended strategies to mitigate flooding and protect properties in the City. If you need any additional information, feel free to contact me Kent Walia at 305-893-6511 ext. 19004 or kwalia@northmiamifl.gov.

Sincerely,

Kent Walia

Kent Walia, CFM, MURP
Planner / CRS Coordinator