




# MIAMI BEACH

OFFICE OF THE CITY MANAGER

NO. LTC # 367-2015

## LETTER TO COMMISSION

TO: Mayor Phillip Levine and Members of the City Commission

FROM: Jimmy L. Morales, City Manager 

DATE: September 11, 2015

SUBJECT: **Progress Report on the City's Local Mitigation Strategy Projects relative to Property Owner Discounts on Flood Insurance Premiums**

### **Introduction and Background**

The purpose of this Letter to Commission is to provide the Mayor and Commission with a progress report on the City's Local Mitigation Strategy (LMS). The LMS is one of the activities that will result in a discount of up to 20% on flood insurance premiums for residents and businesses in our city.

The primary goal of the LMS is to reduce vulnerability to natural, technological, and societal hazards from all sources, but especially from hurricanes, tornadoes, floods, and other severe weather events. The City's participation in the LMS Program improves its standing and classification in the Community Rating System (CRS), making flood insurance under the National Flood Insurance Program more affordable.

### **Program Continuity and Strategy to Inform the Public**

City staff members attend the Miami-Dade County Local Mitigation Strategy meetings once each calendar quarter and review the latest published version of the LMS. Meeting times, dates, and locations are posted on the Miami-Dade County LMS website at [www.miamidade.gov/oem/lms.asp](http://www.miamidade.gov/oem/lms.asp).

This Letter to Commission will be posted on the City's internet and made available to the public through the City Clerk's Office.

The progress report on the projects listed in the City's Local Mitigation Strategy is provided below along with a listing of the projects completed since 2005.

**Flooding:  
Drainage Improvement Projects**

Flooding has a significant environmental, health, and economic impact, causing businesses to be inaccessible to customers and resulting in the additional cost of replacing and repairing damaged property. In addition, due to high groundwater elevation, drainage is slow in certain areas, requiring extensive periods of time to dissipate. This has caused some paved roads to deteriorate and/or fail, resulted in the creation of mosquito breeding areas, and intensified other public health issues. In response to this, the city has changed the stormwater criteria and required all existing projects to be brought up to the 2.7' NAVD boundary condition. The city's comprehensive program of drainage improvement projects will alleviate chronic neighborhood flooding situations.

**Palm and Hibiscus Area Drainage Improvements:** Construction of drainage improvements for Palm and Hibiscus Islands as part of a comprehensive program of drainage improvement projects, which will alleviate chronic neighborhood flooding situations. The project includes construction of new catch basins and outfalls with associated piping. The stormwater will be treated using downstream defender vortex structures and stormwater pumping systems such as duplex and triplex pump stations to discharge to the Biscayne Bay.

**Status:** Design-Build firm currently working on the development of the 90% construction documents.

**Venetian Islands Drainage Improvements:** The project will install new drainage improvements on the islands as part of a comprehensive program of drainage improvement projects, which will alleviate chronic neighborhood flooding situations. The project includes construction of new catch basins and outfalls with associated piping. The stormwater will be treated using vortex structures and stormwater pump stations to discharge to the Biscayne Bay.

**Status:** Under construction, with the contractor installing storm water conveyance, valley gutter, and road reconstruction. The overall project is approximately 45% complete. The storm water pump station design is being finalized.

**Bayshore Drainage Improvements, Lower North Bay Road:** Construction of drainage improvements along Lower North Bay Road between Sunset Drive and Alton Road/Chase Avenue as part of a comprehensive program of drainage improvement projects, which will alleviate chronic neighborhood flooding situations. The project includes construction of new catch basins and one stormwater pump stations with outfalls and associated piping.

**Status:** Project is in the construction phase.

**Citywide Flood Hazard Mitigation Plan:** The project will ensure that the local flooding problem is addressed by the most appropriate and efficient solutions; guarantee that activities are coordinated with each other and with other community goals and activities, preventing conflicts and reducing the costs of implementation; educate residents and others on available hazard and protection measures; build public support for projects; and encourage a community to want to see the mitigation measures implemented.

**Status:** This is a future project.

**Central Bayshore South Drainage Improvements:** The project will provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, 6) Convert existing pumping stations discharge piping from injection wells and add force mains to new outfall, and 7) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** Preparing Phase II design criteria package.

**Sunset Islands III & IV Drainage Improvements:** The project includes construction of new catch basins and outfalls with associated piping on Sunset Islands III & IV. The stormwater will be treated using vortex structures and stormwater pump stations to discharge to Biscayne Bay.

**Status:** The project is in construction phase.

**Sunset Harbor Pump Station Upgrades / Drainage Improvements:** This is the third and final contract to repair and upgrade the three injection well pump stations to the Sunset Harbor neighborhood (Phase I). As a result of changed stormwater regulations, this project will provide a higher level of storm water service to the Sunset Harbor neighborhood. Project expanded (Phase II) for the purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** Phase I Under Construction / Phase II under consideration for construction.

**Citywide Stormwater Infrastructure Improvements:** The city has committed to improving the facilities within the 34 priority basins. Stormwater will be collected and treated through either gravity and pressurized wells or exfiltration trenches, where pollutants will be filtered or treated. This project is fully programmed through neighborhood projects and other projects in the city's five-year Capital Improvement Plan (subject to appropriation of additional programmed funding).

**Status:** The project is in the planning phase.

**LaGorce Island/Upper Bay Road/Allison Island Neighborhood Drainage Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** A Design Criteria Package is being developed for the selection of a Design-Build firm.

**West Avenue Drainage Improvements:** Drainage improvements are proposed for the West Avenue/Bay Road neighborhood, which consist of additional drainage collection, conveyance, treatment, and disposal facilities. The drainage project will mitigate street level flooding to reduce residential/commercial flooding concerns.

**Status:** The project is under construction.

**Middle North Bay Road Drainage Improvements:** This project addresses numerous resident complaints and staff observations regarding a low stormwater service level in the neighborhood. Drainage improvements would include additional drainage collection, conveyance, treatment, and disposal facilities.

**Status:** The project is in the planning phase.

**Lakeview Drainage Improvements, North Shore Neighborhood:** This project is included in the City's 5 Year Stormwater Master Plan, and is part of the larger *LaGorce/Upper Bay Road* project. Construction of drainage improvements for the Lakeview area (bounded by 51st Street to the north, N. Bay Road to the west, Cherokee Avenue to the east, and Lake View Drive to the south) as part of a comprehensive program of drainage improvement projects, which will alleviate chronic neighborhood flooding situations. The project includes construction of new catch basins and outfalls with associated piping.

**Status:** The project is in the planning phase.

**Oceanfront Drainage Improvements:** Construction of drainage improvements from 27th Street on the south, Indian Creek on the west, 44st Street on the north, and Miami Beach Drive on the east are part of a comprehensive program of drainage improvement projects. The project includes construction of new catch basins and outfalls with associated piping. The stormwater will be treated using vortex structures and stormwater pump stations.

**Status:** The project is in the planning phase.

**South Pointe III – V Drainage Improvements:** Construction of drainage improvements within the limits of this project south of 5th Street. The project includes construction of new catch basins and outfalls with associated piping. The storm water will be treated using new gravity wells and a stormwater pump station.

**Status:** The drainage portion of the project is complete.

**Flood Proofing Sewer and Pump Stations:** Relining and sealing 31 pump stations and 500 manholes throughout the city to prevent water intrusion—which would damage pump station equipment/structures—and failure of stations, thereby avoiding flooding. In the past, five pump stations have failed during storms and resulted in flooding.

**Status:** Construction is ongoing.

**Canal Cleaning and Shaping:** Dredging of the approximately 12 miles of inland canals located within the city would restore depth and bottom contour. This restoration would directly impact the ability of the canal to hold tidal flooding and minimize flooding of surrounding properties during significant weather events. Mitigation may include placement of new riprap, creation of new sea grass beds, or creation of artificial reefs.

**Status:** This is a future project.

**48" Outfall at Easement 4180–4200 Chase Avenue:** Improvements include building a new 48" outfall and installing approximately 450 linear feet of 48" HDPE pipe, one manhole, and one catch basin. When completed, this project will produce a stormwater system capable of providing a high level of service in the area.

**Status:** This is a future project.

**Stormwater Outfall and Seawall Reconstruction:** Replacement of seawalls and 150 stormwater outfalls with associated relining of piping leading to outfalls in areas that have three properties with repetitive flood claims. Project will also include a pollution control device and possible demolition of existing seawalls, repair of seawalls, and relocation of riprap.

**Status:** Two seawalls are ready for construction, three seawalls are under design, and eight seawalls are future projects.

**Flamingo Park 6th Street (5th / 7th Streets) – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** The project is in the planning stage.

**Lower North Bay Road – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** The project is under construction.

**Sunset Islands 3 & 4 – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the construction stage.

**Venetian Islands – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is under construction.

**Palm & Hibiscus Islands – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** Design-Build firm currently working on the development of the 90% construction documents.

**City Center – Neighborhood Improvements (Tier 4 FDOT Alton Road Integrated Solution):** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**North Shore – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Citywide Home Elevations:** The project will assist eligible homeowners to elevate their properties in order to mitigate flooding. The project will also encourage homeowners to become more resilient and to incorporate climate change considerations in their home improvement projects. It will also promote the inclusion of mitigation strategies that foster community resilience against flooding risks.

**Status:** This is a future project.

**Biscayne Pointe – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, 6) Convert existing pumping stations discharge piping from injection wells and add force mains to new outfall, and 7) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**South Pointe – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, 6) Convert existing pumping stations discharge piping from injection wells and add force mains to new outfall, and 7) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Lincoln Road – Neighborhood Improvements (Washington Avenue to Lenox Avenue):** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, 6) Convert existing pumping stations discharge piping from injection wells and add force mains to new outfall, and 7) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Normandy Isle South – Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Normandy Shores – Neighborhood Improvements**

The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, and 6) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Nautilus – Neighborhood Improvements**

The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, 5) Construct pump stations, controls and force mains, 6) Convert existing pumping stations discharge piping from injection wells and add force mains to new outfall, and 7) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Central Bayshore Neighborhood – Existing Pump Station Conversion:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system, and reduce reliance on gravity or pressurized drainage (injection) wells. The improvements consist of one or a combination of the following: 1) Construct additional stormwater collection system piping to interconnect existing pipe networks, 2) Construct water quality treatment devices, 3) Convert pumping stations discharge piping from injection wells and add force mains to new outfall, and 4) Construct new outfall and/or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Star Island – New Pump Station:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Construct additional stormwater collection system piping to interconnect existing pipe networks, 2) Construct water quality treatment devices, 3) Construct pumping stations, controls and force mains, and 4) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Middle Bay Road – New Pump Station:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Construct additional stormwater collection system piping to interconnect existing pipe networks, 2) Construct water quality treatment devices, 3) Construct pumping stations, controls and force mains, and 4) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).



**Status:** This project is in the planning stage.

**Sunset Islands 1 & 2 – New Pump Stations:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Construct additional stormwater collection system piping to interconnect existing pipe networks, 2) Construct water quality treatment devices, 3) Construct pumping stations, controls and force mains, and 4) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices)

**Status:** This project is in the planning stage.

**Town Center – New Pump Station:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Construct additional stormwater collection system piping to interconnect existing pipe networks, 2) Construct water quality treatment devices, 3) Construct pumping stations, controls and force mains, and 4) Repair or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices)

**Status:** This project is in the planning stage.

**Belle Island – New Pump Station and Existing Pump Station Conversion:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system, and reduce reliance on gravity or pressurized drainage (injection) wells. The improvements consist of one or a combination of the following: 1) Construct additional stormwater collection system piping to interconnect existing pipe networks, 2) Construct water quality treatment devices, 3) Construct pumping stations, controls and force mains, 4) Convert existing pumping stations discharge piping from injection wells and add force mains to new outfall, and 5) Construct new outfall and/or upgrade existing outfall pipes and seawalls (inclusive of tidal backflow prevention devices).

**Status:** This project is in the planning stage.

**Bayshore Neighborhood Improvements:** The purpose of the project improvements is to provide a higher level of service defined by flood protection and control of pollutant loading in the stormwater system. The improvements consist of one or a combination of the following: 1) Repair, replace, and/or install curbs and gutters, 2) Reconstruct and/or raise streets and sidewalks, 3) Repair, replace, and/or install collection systems, catch basins and manholes, 4) Construct water quality treatment devices, and 5) Construct pump stations, controls and force mains.

**Citywide Tidal Flooding Mitigation Phase 1:** The purpose of the project improvements is to prevent the backflow of water from the Biscayne Bay into the City's stormwater management system and up through the stormwater inlet grates flooding the roadway curb and gutter. This tidal flooding poses a threat to public health and safety, inconveniences the public, and has caused major damage to structures, and killed lawns and landscaping. In addition, tidal flooding saturates the base structure of roadways causing failure of roadways prior to their expected useful design life. This project consists of the installation of backflow prevention valves (aka "Tideflex" valves) on a majority of the PSMS outfalls to the Biscayne Bay and in the lowest lying areas of the City.

**Status:** This project is in the planning stage.

**Drainage Hot Spots:** This project will provide localized stormwater improvements that address drainage "hot spots" within the City. The project will provide funding to allow City staff to design, contract for, and implement solutions to limited areas of the City which are within the definition of the projects approved by the City Commission in the Resolution authorizing issuance of the Series 2015 Bonds, but not incorporated into other neighborhood improvement projects identified in the Stormwater Program.

**Status:** This is an ongoing construction project.

### Windstorm

**Storm Shutters and Protective Glass for City Buildings:** The city is a barrier island that is subject to high winds, missile hazards and significant impact damage. The buildings listed below require protection for windows during a significant weather event.

**Status:** The below project is in the planning phase.

Building Name	Location Address
Miami Beach Botanical Garden	2000 Convention Center Drive

### Other Hazards

**Acquisition of Emergency Generators:** Acquisition of emergency generators to ensure continued operation of critical city facilities/systems and the appropriate levels of service for city residents during and after a disaster event.

**Status:** The project is expected to be completed by 2018.

**West Avenue Bridge:** The project is of regional significance and will help relieve congestion on State road 907 (Alton Road). A connected West Avenue would help reduce the volume of local traffic at the busiest intersections. In addition, it would provide a safer venue for cyclists, pedestrians, and motorists making their way to the causeway to Miami, than other existing venues.

**Status:** A design consultant has been selected and negotiations are progressing.

**Citywide Dune Restoration & Enhancement Project:** This citywide project seeks to restore the City's coastal dune system by removing non-native vegetation, planting native species, and selectively trimming native vegetation. This project will improve the overall health and stability of the dune system so it is best suited to retain sand and protect upland structures from storm surge and flooding. The project will also install a rope and post fence system around the dune system to protect the project's results and minimize trampling impacts to the protected area. Educational signage will educate visitors about the structure of the dunes, their importance, and the vegetation housed therein.

**Status:** On-going (maintenance and monitoring).

**Streetlight System Upgrade:** There are approximately 4,000 streetlight poles with base electrical system connections that do not meet Miami-Dade County code. Flooding results in water intrusion inside the bases of these streetlight poles, which creates short circuits that cause lighting system malfunctions. This project improvement will include re-wiring and placing individual fuses at each pole base. It will eliminate streetlight service interruptions, and reduce repetitive interruptions and/or damages to the street lighting infrastructure system.

**Status:** This is a future project.

**Portable Traffic Light Signals:** During power outages, the traffic lights are inoperable, causing a potential hazard. Portable traffic signals will provide the safety that is needed for traffic control. The city anticipates that it will need ten portable traffic signals to adequately handle an emergency situation.

**Status:** This is a future project.

**Citywide Wastewater Infrastructure Improvements:** The wastewater lines are approximately 50-80 years old. The iron pipes are significantly tuberculated, resulting in hydraulic problems and water quality problems. The useful life of these force mains is approximately 50 years and the pipes are either at the end of or beyond their useful life. This project will implement the city's Water System Master Plan, which will replace aging water lines that are 60 years old or more.

**Status:** This is an ongoing project.

**Citywide Water Infrastructure Improvements:** The project includes the replacement of aging water lines (60+ years old). These iron pipes are significantly tuberculated which has resulted in diminished water quality and hydraulic problems. Under certain conditions, pipes release iron into drinking water supplies, resulting in water quality problems. This project is fully programmed through neighborhood projects and other projects in the City's 5-year Capital Improvement Plan, subject to appropriation of additional programmed funding.

**Status:** This is an ongoing project.

**Recommendations:**

1. The City will continue to participate in Miami-Dade County's LMS program and monitor the projects, as needed.
2. The City will continue to have various outreach projects to inform the residents and visitors about hurricanes and floods preparedness and safety.

Please contact me if you need any additional information.

JLM/DM/EC/JW//JH  
Attachment

## **Attachment 1 (Page 1)**

### **Local Mitigation Strategy Projects Completed Since Fiscal Year 2004/2005**

#### **FY 2004/2005**

1. Bay Road Streets/Sidewalks Improvements (14th to 16th Streets)

#### **FY 2006/2007**

1. Bay Road Drainage Pump Station Clevel of service-out
2. Flamingo Box Culverts BP 10A
3. Flamingo Lummus BP 10D Streets/Sidewalks Improvements (Washington Avenue)
4. Miami Beach Golf Course–Drainage Well

#### **FY 2007/2008**

1. 7th & 8th Streets (BP-10B) Streets/Sidewalks Improvements
2. 16th Street Drainage Improvements
3. Flamingo Lummus BP 10B Streets/Sidewalks Improvements
4. Oceanfront BP 6 Streets/Sidewalks Improvements: Phase I
5. Stormwater System Prairie Avenue
6. Venetian Islands BP 13B–Belle Isle Streets/Sidewalks & Park Improvements

#### **FY 2008/2009**

1. 8th Street Spot Flooding Remediation (Hot Spot)
2. Flamingo Neighborhood (Lennox & 6th) Bid Pack 1A

#### **FY 2009/2010**

1. 69th Street from Biscayne Bay to Collins
2. Normandy Isle Normandie Sud BP 4 Streets/Sidewalks Improvements
3. Oceanfront BP 6 Streets/Sidewalks–Phase 1B–40th Street & Collins Avenue

#### **FY 2010/2011**

1. Drainage Improvements West 44th Street & Royal Palm
2. Nautilus BP 7 Streets/Sidewalks Improvements
3. Normandy Shores BP 3 Streets/Sidewalks Improvements
4. Oceanfront BP 6 Streets/Sidewalks Improvements: Phase II
5. South Pointe Streetscape Phase II BP 12C Streets/Sidewalks Improvements
6. Stormwater Pipe–Repairs
7. Sunset Islands 1 & 2 Replacement of Two Outfalls
8. Biarritz and Rue Granville
9. Prairie Avenue

#### **FY 2011/2012**

1. Waterways Dredging
2. North Bay Road & 4th Street–Drainage Hot Spot
3. Washington Court, Between Washington Avenue & Park Avenue

## **Attachment 1 (Page 2)**

### **FY 2012/2013**

1. Extensive Repairs to Seawalls–Wofford Park Seawall Repairs
2. Sunset Islands I & II Drainage Improvements
3. South Pointe II Drainage Improvements

### **FY 2013/2014**

1. Parkview Canal Seawall Revetment
2. Belle Island Outfall Replacement
3. Star Island Drainage Improvements
4. City Center–Historic District Drainage Improvements
5. Regional Communication/Command Van
6. Lake Pancoast Right-of-Way Improvements
7. Biscayne Point Right-of-Way Improvements

### **FY 2014/2015**

1. Central Bayshore Right-of-Way Improvements
2. South Pointe III, IV, V Right-of-Way Improvements
3. Crespi Blvd Drainage Emergency Improvement/Water Main Replacement-79th Street to 85th Street