



To: Floodplain Management Committee  
From: Jeff Geimer, Community Rating System Coordinator  
Capital Project Manager  
Subject: Status of Action Plan Implementation  
Date: September 19, 2014

On February 22, 2000, Resolution 2000-18 adopted the City of North Miami's Floodplain Management Plan. On February 8, 2005, Resolution 2005-3 adopted the 2004 update to the plan. Section 2 on the 2005 resolution instructs the Floodplain Management Committee to annually review the progress of the action plan and to recommend revisions to the plan as necessary. This letter is a result of the committees' review of the action plan.

For credit under the Community Rating System, this letter must 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. A Copy of this report will also be made available on-line through the City's website. Additionally, a copy of the report along with the updated Floodplain Management Plan are available for review at the North Miami Public Library, 835 NE 132 Street.

## **1. Background**

On April 27, 1999, the North Miami City Council adopted Resolution 99-28, which established the Floodplain Management Planning Committee. The Committee's duties included the development and recommendation of the City's original Floodplain Management Plan. Upon completion of the original Plan, the Committee remained together to make recommendations on ways to enhance life within the floodplain.

For preparation of the original Floodplain Management Plan, the Committee held a number of meetings between May 1998 and February 2000 when the City Council reviewed and approved the plan. During the planning process, a total of six committee meetings/work sessions were held to review possible activities and prepare an action plan. Representatives from various agencies, including Miami-Dade County Department of Environmental Resources Management (DERM) and South Florida Water Management District (SFWMD) attended the meetings to offer expertise and insight on drainage systems and flooding.

All of committee meetings were posted and open to the public. Two advertised Public Hearings were held allowing the residents of North Miami a chance to discuss and critique the plan. The first Public Hearing was held October 21, 1999 following the development of the draft Floodplain Management Plan. Additionally, this draft was disseminated to approximately 25 outside agencies for review and comments, with written comments received from National Marine Fisheries. Oral comments were offered from several agencies including Linda Bell,



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Florida Department of Community Affairs; David Stroud, ISO/CRS Specialist; and David Clukie, ISO/CRS Specialist. The final public hearing was held on February 22, 2000, in conjunction with the City Council meeting where the Plan was officially adopted.

Since adoption of the original Floodplain Management Plan, the Floodplain Management Planning Committee has continued to meet annually to assess the progress of the Plan's implementation as well as recommend changes and improvements as necessary for the Plan's success. This review process is outlined in the annual outreach strategy (OPS) developed for the National Flood Insurance Program Community Rating System – Activity 330. The Committee also regularly reviews the City Flood Ordinance and makes recommendations for modification to the City Council as needed.

The updated version of the Floodplain Management Plan was once again developed in a public setting. The updated plan of December 2004 was presented to the Floodplain Management Planning Committee during their meeting on October 22, 2009. The meeting was advertised and provided an opportunity for committee members, staff, and the public to provide input on the updated plan. Draft versions of the updated Plan were mailed to Miami-Dade County (DERM and OEM) for review and comments. With minimal changes to the plan, the Floodplain Management Planning Committee recommended approval and recommended that the Plan go to the City Council for adoption. The final opportunity for public comment on the Plan came at the December 8, 2009 City Council meeting. It was at this meeting that the updated Plan was adopted by the Council.

## **2. Availability of the Plan**

A copy of the original Floodplain Management Plan and all subsequent updates to the plan can be found at the following location:

- North Miami Library – 835 NE 132 Street
- North Miami Motor Pool – 1855 NE 142 Street
- North Miami Utility Operations Center – 1815 NE 150 Street

## **3. Review of the Plan's action**

The sixteen action items found in Chapter 8 of the December 2009 Floodplain Management Plan are reviewed in this section.

### Project 1: Open Space Preservation

The City should continue its open space preservation for its natural and beneficial aspects as flood storage and wildlife preservation. A total of 1,537 acres are currently open space. The



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designs for drainage and other infrastructure for proposed projects on developable land should be carefully reviewed to assure suitability with the City's goals.

Budget: Staff time and resources.

Timetable: Ongoing program.

Status: Ongoing. Open space has not been impacted and all new projects are carefully reviewed.

### Project 2: Stormwater System Maintenance Program

Continue the stormwater system maintenance program as discussed in the NPDES Annual Report.

Budget: Staff time and resources.

Timetable: Ongoing program.

Status: Ongoing. The Public Works Department continues its stormwater system maintenance program.

### Project 3: Flood Prevention and Mitigation: Drainage Basins 12 and 13

Stormwater Master Plan Priority Basin 12 includes two sub-basins in the Biscayne East system. The area is bounded by the Biscayne Canal and NE 6 Avenue, between NE 135<sup>th</sup> and NE 129<sup>th</sup> Streets. 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 119<sup>th</sup> and NE 123<sup>rd</sup> 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 drainage systems, as outlined in the Master Plan conceptual design, will prevent repetitive flooding, reduce damages to residential properties, and decrease the number of recurring insurance claims.

Budget: Estimated cost: \$1,000,000

Timetable: Completion by September 2014.

Status: Ongoing. The City has completed approximately 85% of this project over the last three years and the remaining work is scheduled to be completed in FY15.

### Project 4: 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, Sunkist Grove Community Center) the Building and Zoning Facility, 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



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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: \$450,000

Timetable: As funding becomes available.

Status: Unchanged. The City will be seeking grants to make these improvements.

### Project 5: Embankment stabilization at Keystone Point Bridge #2

Keystone Bridge #2 is a functioning bridge that provides access to Keystone Point Islands #5 and #2. The Florida Department of Transportation (FDOT) inspects this bridge annually. While FDOT has determined that the bridge is in fair working condition, the surrounding embankment is highly susceptible to severe damage from storm surges. Once the embankments are destabilized, residents are effectively cut off from the mainland and emergency response teams cannot reach the islands. The city is therefore proposing to hire a firm to design a stabilization protocol and install an embankment stabilization system.

Budget: Estimated cost: \$1,800,000

Timetable: Project was completed.

Status: Completed.

### Project 6: Surge Resistance and Flood Mitigation at Keystone Point and Sans Souci

The eastern boundary of North Miami borders Biscayne Bay for approximately three miles. Keystone Point and Sans Souci are the two subdivisions 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 need 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: \$2,000,000

Timetable: As funding becomes available.

Status: Unchanged. The City will be seeking grants to make these improvements.



Project 7: Sanitary Sewer Backup

The city maintains and operates forty-five sanitary sewer lift stations. These lift stations vary in configuration and size and allow sanitary sewage to flow through a pressurized sewer main system. This sewer system infrastructure is monitored regularly to ensure it functions properly. 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-six sanitary sewer lift stations have high priority needs for generators. Ten of the lift stations currently have permanent emergency back-up generators installed. The City also has ten portable generators for use when a power failure impacts any of the City's sewer pump stations.

Budget: Estimated cost: \$1,000,000

Timetable: As funding becomes available.

Status: Ongoing. The portable generators will be rotated between the sewer pump stations until enough generators are purchased.

Project 8: 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 eight remote wells. These emergency generators will ensure the wells remain operational during power outages 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 prevent the infiltration of storm and wastewater during a major rain event. Additionally, it will also ensure interconnectivity with neighboring municipalities and service areas.

Budget: Estimated cost: \$325,000

Timetable: As funding becomes available.

Status: Complete and ongoing. The City has installed connections for the use of back-up generators at the six remote locations. In the event of an extensive power failure, the portable backup power generators can be used for this purpose.

Project 9: Flood Zone Data Maintenance: GIS System

This project will fund the creation of a GIS system to support several activities of the city's National Flood Insurance Community Rating System program including mapping, annual outreach and notification, and the maintenance of all flood zone designations and other data for all real property folio numbers within the city. In addition, the project will integrate city's data into Miami-Dade County's GIS system tailoring products generated for city use. The additional information generated by this system will be essential for the preparation of detailed flood mitigation reports and allow users to track conditions by specific property location. This data will then be utilized to clearly identify and designate low lying areas, which will streamline flood prevention efforts when designing new systems and upgrading existing drainage systems.



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Budget: Estimated cost: \$125,000  
Timetable: As funding becomes available.  
Status: Unchanged. The City will be seeking grants to make these improvements.

### Project 10: Global Positioning System

The city of North Miami has purchased a set of base maps from Florida Power and Light that are currently utilized by all city Departments. The city is seeking funds to purchase a Global Positioning System (GPS) that would facilitate and streamline the updating and retrofitting of water, sewer and stormwater utilities. The city of North Miami has municipal boundaries along Biscayne Bay. The positioning and maintenance of channel markers and other safety signs could be implemented more using a GPS instead of conventional surveying methods.

Budget: Estimated cost: \$12,000  
Timetable: As funding becomes available.  
Status: Unchanged. The City will purchase the units when funding becomes available.

### Project 11: Emergency Portable Stormwater Pumps

The easternmost boundary of North Miami borders Biscayne Bay for approximately 3 miles. There are several low-lying areas that flood during regular rainfall and major storm events. The city is seeking 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  
Timetable: As funding becomes available.  
Status: Unchanged. The City will be seeking grants to purchase the pumps.

### Project 12: Gravity Sewer Systems Improvements for Groundwater Infiltration Reduction

The city is seeking 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, in turn, 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 are residents.

Budget: Estimated cost: \$6,000,000  
Timetable: As funding becomes available.





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Status: Ongoing. The Public Works Department continues to make improvements to the sewer system. One million dollars was spent on improvements in FY12 and FY13. There is currently another \$1.3 million worth of work scheduled for FY15.

### Project 13: 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. The Center, however, 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 is therefore seeking funds to install a stationary emergency generator at the Center.

Budget: Estimated cost: \$90,000

Timetable: As funding becomes available.

Status: Unchanged. The City will be seeking grants to purchase the generator.

### Project 14: Replacement Generator for Police Station

The current generator, which is 10 years old, supplies back up power for the North Miami Police Station. The Police Station is an integral part of Miami-Dade County's Emergency Management's Divisional Response Plan. The city of North Miami 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 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 is therefore seeking funds to replace the back-up generator at the Police Station.

Budget: Estimated cost: \$250,000

Timetable: As funding becomes available.

Status: Unchanged. The City will be seeking grants to purchase the generator.

### Project 15: 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 which 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



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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

Timetable: Project was completed.

Status: Completed. The City has performed renovations and has possibly corrected the infiltration problem. Until the City experiences a major wet weather storm, we will not know if the problem has been resolved.

#### Project 16: Replacement of U.P.S. for Police Station

The city of North Miami is an integral part of Miami-Dade County's Emergency Divisional Response Plan. The city of North Miami 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 the Town of Indian Creek. 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 (5) years old; all batteries have reached the end of useful service life; and it is at its maximum capacity. The city is therefore seeking funds to replace the Uninterruptible Power Supply.

Budget: Estimated cost: \$80,000

Timetable: As funding becomes available.

Status: Unchanged. The City will be seeking grants to purchase the system.

#### **4. Why items have not been completed**

Of the sixteen action items, eight have been started or completed. None of the action items have been dropped from the City's plan. Eight of the items currently remain unchanged since funding has not become available to implement the projects.

#### **5. Recommendations**

The following recommendations have been made for the upcoming fiscal year:

- City staff should continue their efforts to implement the plans recommendations;
- The library's collection of documents pertaining to flooding and flood protection should continue to be expanded;





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- The City’s website should contain additional information pertaining to flood protection;
- The “only rain down the drain” campaign should be expanded;
- 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; and
- Continue to research and apply for outside funding for capital improvement projects.

The Floodplain Management Plan is currently scheduled for updating. The Floodplain Management Planning Committee will hold another meeting in October specifically for the purpose of updating the plan. As part of the update, the action items will be revised to reflect the current needs of the community.