

City of Boynton Beach Flood Mitigation Plan

Action Plan Update

2017



2017 City of Boynton Beach Flood Mitigation Plan Progress Report

1. Name of the CRS Floodplain Management Plan:
The City of Boynton Beach, Florida Flood Mitigation Plan (FMP)

2. Date FMP Adopted:
July 16, 2013

3. Location where copies of this Progress Report and FMP are available for review:
City of Boynton Beach
Office of Stormwater Supervisor, Angela Prymas, P.E.
124 E. Woolbright Road
Boynton Beach, Florida 33435
(561) 742-6421

4. Summarize any flooding that occurred during the year (if any):

N/A

5. What impact did the floods have on repetitive loss areas?

N/A

6. List what was accomplished during the previous year:

Harbor Estates (North & South Roads) Neighborhood Improvement Project

The Harbor Estates Neighborhood experiences periodic roadway flooding and standing water during heavy rainfall events, which has affected the residential property owners located in the vicinity of North and South Roads. To improve the quality and reliability of the Harbor Estates Neighborhood Utilities, the City of Boynton Beach will provide a new stormwater system that will collect the stormwater and discharge through four (4) shallow outfalls located along the north edge of North Road and one (1) shallow outfall at the southeast corner of the neighborhood. The project also includes replacing aging and undersized water mains and upgrading fire hydrants in the project area. A new roadway and curbing will also be provided.

The Project is under construction. The water main is complete and in service. The storm water is about 60% completed and road work has started. The entire project is estimated to be completed in November 2017.

Central Seacrest Corridor Neighborhood Utility Improvements – Phase II Bid Award

The goal of the project is to replace aging and undersized water mains and improve drainage within the right of way. The project is a continuation of the work was completed during Phase I.

The Utilities Department will conduct Customer Outreach for the project that will include neighborhood informational meetings. Brochures and door hangers will be placed at each residence in the construction area prior to construction activity. There will be daily construction updates on Facebook as well as Twitter updates for road closures and construction activity. A complaint line will be available for residents to call City and Contractor staff directly, with immediate response to concerns and complaints. City staff will track and document all outcomes and resolutions.

NE 20th Avenue Drainage Improvements Project

The purpose of this project is to mitigate localized flooding within an existing residential neighborhood of 13 acres by decreasing the extent of inundated area water ponding duration during rainfall events. The project will also reduce nutrient loads to the environment and local waterways. In addition to the expected increase of resident's satisfaction and wellbeing; the community will no longer be exposed to flooding repercussions, i.e.

- *unable to access/egress dwellings due to water depth, extent of inundated area and water ponding duration
- *damage to vegetation and property
- *soil erosion
- *hindering school/work attendance
- *safety concerns

The Stats of the project consists of enhancement of City operations by installing approximately

- *1,650 LF of 24-inche diameter exfiltration trench
- *3,000 LF of swales
- *25 Inlets and catch basins
- *Substantial Completion: 120 days
- *Contract amount of \$614,369.13
- *plus a 10% contingency of \$61,436.91, for a total estimated amount of \$675,806.04.

7. Were any City of Boynton Beach objectives not reached or is implementation behind schedule? If so, state why.

The status of each Action Item is attached to this report.

8. Should new projects specific to the City of Boynton Beach be started or should any of the recommendations or objects be revised:

No. The FMP will be updated by the FMP Task Force in 2019, and new projects will be added at that time.

9. Annual Evaluation Report discussed and/or made available at a public meeting.
The status of all mitigation projects and success stories are reported and discussed at the Flood Mitigation Plan Task Force meetings. All general meetings are publicized through posted announcements.

The status of the City's flood mitigation projects and general Capital Investment Projects are discussed in the City's budget meeting hearings which are publicly held.

10. We have provided copies of this report to our governing board and local media.
This report is being submitted to the City Commission via an agenda item. This report is being released to the local media, and is available to the public.

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City of Boynton Beach
124 E. Woolbright Road
Boynton Beach, Florida 33435
(561) 742-6421*

Attachment

Action Plan - Section Nine

The following are flood mitigation activities recommended by the City of Boynton Beach Flood Mitigation Task Force in September 2012.

Action Items

1. Implement the Utility Department capital improvement project named *NE 3rd Street Stormwater Improvements*, which includes NE 1st Street and NE 6th Avenue in the Heart of Boynton area (See Appendix N for details of project).

Action: This area is from Boynton Beach Boulevard north to the C-16 Canal and from Seacrest east to Railroad Avenue. It includes the City's Public Works compound, which was a problem with TS Isaac because this is where the City vehicles are fueled but it was under water; we would not have been able to fuel our emergency vehicles if there had been five more inches of rain. Will require an RFQ for a study first and then the design would follow the study. The NE 1st Street and NE 6th Street area should be top priority.

Funding: Capital Improvement Program Fund. Will research possibility of FEMA grant funds. This mitigation project will be submitted to the Palm Beach County Unified Local Mitigation Strategy (PBC LMS) Project Prioritization List (PPL).

2017 Progress: Utilities staff is doing in-house swales and exfiltration trenches to reduce flooding in the area. The project remains in the Palm Beach County Unified Local Mitigation Strategy (PBC/LMS) Project Prioritization List (PPL).

2. Implement the Utility Department *Lakeside/NE 20th Avenue Neighborhood Utility Improvements* capital improvement project (See Appendix N).

Action: Has been on the books for a while and would require an RFQ to go out for engineering services to study the area and come up with a design.

Funding: Capital Improvement Program Fund. Will research possibility of FEMA grant funds. This mitigation project will be submitted to the Palm Beach County Unified Local Mitigation Strategy (PBC LMS) Project Prioritization List (PPL).

2017 Progress: Both Lakeside Gardens and NE 20th Avenue Neighborhood Utility CIP are currently under construction. There has been a total investment of \$850,000 for engineering and construction.

3. Implement a program to encourage homeowners' associations (HOAs) to maintain their drainage control structures/systems.

Action: The Utilities Department will create a set of Standard Operating Procedures for the management companies of the HOAs so that they are educated as to what they should be doing pre-storm and post-storm. There should be a checklist for the management companies to follow. This will empower the HOAs to hold the management companies responsible if flooding occurs.

Funding: Staff time (operating funds)

2017 Progress: Ongoing outreach efforts in coordination with FDOT, SFWMD and LWDD through workshops, utilities annual report and other publications. SOPs were completed in 2016.

4. Implement the Utility Department capital improvement project named "Golfview Harbor Neighborhood Utility Improvements". This area is west of I-95 (See Appendix N).

Action: Primarily a swale project. To be completed in the next fiscal year of 2013-2014.

Funding: Capital Improvement Program Funds. Will research possibility of FEMA grant funds.

2017 Progress: In-house swale project completed in 2016 in place of the CIP project.

5. Continue City participation in, and compliance with the National Flood Insurance Program (NFIP) and the Community Rating System (CRS). Seek CRS classification improvements within capabilities of City programs, including adoption and administration of FEMA-approved ordinances and flood insurance rate maps (FIRMs) thus enhancing the City's flood mitigation efforts while securing insurance premium rewards for its residents and businesses.

Action: This is the responsibility of the Development Department. This is an ongoing policy and the City will continue its current approach.

Funding: Staff time (operating funds)

2017 Progress: 5 year cycle visit has been completed. The City improved to a Class 6 rating. On September 19, 2017 the City Commission approved by ordinance 17-029, the City's adoption of FEMA's Palm Beach County Flood Insurance Rate maps (FIRMs) to become effective October 5, 2017.

6. Implement the Utility Department *Chapel Hill Utility/Lake Eden Improvements* capital improvement project. This area is east of I-95 (See Appendix N).

Action: Primarily a swale project. Will be completed in the next fiscal year of 2013-2014.

Funding: Capital Improvement Program Funds. Will research possibility of FEMA grant funds.

2017 Progress: Swales have been completed in portions of the neighborhood. This is an ongoing maintenance project.

7. Encourage all property owners to purchase flood insurance.

Action: This is the responsibility of the Development Department to be implemented through education and outreach.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

8. Encourage drainage solutions such as the use of pervious concrete and pavement.

Action: This is current City policy and will continue as is. This is the responsibility of the Development Department.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

9. Provide ongoing training and evaluation of the CERT program.

Action: This is current on-going City policy and will continue as is. The CERT members meet with the City's Fire Department four times a year. Two of those meetings are within two months of hurricane season. The Boynton Beach CERT program is one of the best in the County.

Funding: Staff time (operating funds)

2017 Progress: The City's CERT program continues to grow each year.

10. Implement the Utility Department *North and South Road Neighborhood Utility Improvements* capital improvement project (See Appendix N).

Action: The City has tried to implement this project but it is on hold. Originally it was a water main and stormwater project. The homeowners have refused to grant an easement in their side yards for the outfall. This area is at the seawall. Part of the problem is that the lots of some of the newer homes are built at a higher elevation, which has impeded the sheet flow of water.

Funding: Capital Improvement Program funds. Will research possibility of FEMA grant funds. This mitigation project will be submitted to the Palm Beach County Unified Local Mitigation Strategy (PBC LMS) Project Prioritization List (PPL).

2017 Progress: North and South Roads Neighborhood Utility CIP is currently under construction with a total investment of over 2 Million for engineering and construction.

11. Implement the Utility Department capital improvement project called *Replacement Stormwater Pump in Stormwater Retention Areas (See Appendix N)*.

Action: This is to help with Utility Department's operations and maintenance budget. Funded each year basically on an as needed basis. There is not a specific project area identified. The City may need a replacement pump if the flow exceeds the pump capacity. These funds would be used if something comes up that would exceed the operating budget

Funding: Capital Improvement Program Funds. Could only submit project for a grant if a specific pump or project is identified.

2017 Progress: This program has been implemented. Pumps are purchased and replaced on an as-needed basis.

12. Encourage the City's departments to come forward with projects to enhance flood mitigation, particularly in repetitive loss areas and areas of frequent flooding for which the Grant Coordinator will pursue appropriate grants to fund the projects. Some examples of available grants are:

- Flood Mitigation Assistance Grant
- Hazard Mitigation Grant
- Pre-Disaster Mitigation Grant
- Repetitive Flood Claims
- Severe Repetitive Loss Grant

Action: The Grant Coordinator will follow up annually on this responsibility and provide a progress report to the Flood Mitigation Task Force in August of each year.

Funding: Staff Time (operating funds). Matching funds, if required will have to be budgeted in or will be assumed by the homeowner if agreed.

2017 Progress: The City has applied to the SFWMD Stormwater Grants program and the Local Mitigation Strategy during 2016.

13. Assign an individual to continually update information prior to, during, and after a hurricane or flood event, including road and bridge closures, evacuation orders, emergency shelter locations and electrical outages. This update responsibility can include some of the following options:

- City website
- Email advisements
- Television Government Access Channel
- BBTv
- Electronic message boards
- Reverse 911 telephone system

- E-News
- Public service announcements through local media (radio, newspapers, etc.)
- Social media including Twitter and Facebook
- Citizen Hotlines
- Brochure handouts at Points of Distribution (PODs). The POD in Boynton Beach is the Hester Center.

Action: This is a current City procedure and will continue as is as a responsibility of the Boynton Beach Emergency Management Division. The Standard Operating Procedure written for emergency information dissemination shall include the items listed above.

Funding: Staff time (operating funds)

2017 Progress: This is currently being implemented.

14. Implement the Utility Department *Stormwater Rehabilitation through the Entire City System* capital improvement project (See Appendix N).

Action: This is to help our operations and maintenance. Funded each year basically on an as needed basis. There is not a specific project area identified. This is used if something would exceed the operating budget.

Funding: Capital Improvement Program Funds. Could only submit project for a grant if a specific pump or project is identified.

2017 Progress: Completed.

15. Ensure that City crews maintain and operate all flow control structures for which it is responsible and encourage private and regional entities to do the same.

Action: This is the responsibility of the Utility Department.

Funding: Staff time (operating funds)

2017 Progress: Ongoing coordination with FDOT, SFWMD and LWDD through meetings and workshops.

16. Evaluate the *City of Boynton Beach Flood Mitigation Plan*, particularly the Action Plan, annually.

Action: The Development Department will be responsible to prepare an evaluation of the Flood Mitigation Plan, including the Program for Public Information, for every annual meeting of the Flood Mitigation Plan Task Force. This responsibility will be ongoing.

Funding: Staff time (operating funds)

2017 Progress: The 2017 Flood Mitigation Plan Evaluation was completed in September and this evaluation will be communicated to Commission.

17. Update the *City of Boynton Beach Flood Mitigation Plan* every five years.

Action: The Development Department will be responsible to ensure that the Flood Mitigation Plan is updated every five years and coordinate the update with the *Palm Beach County Unified Local Mitigation Strategy's* five-year update committee.

Funding: Staff time (operating funds)

2017 Progress: This will be done in 2018.

18. Enhance communication methods in preparation for, response to, and recovery from natural hazard events by utilizing social media, smartphone applications, and other new technology.

Action: Palm Beach County has introduced a free smartphone app, PBC DART (Palm Beach County Disaster Assessment and Resource Tool). The American Red Cross Hurricane app use should be encouraged. The City's Emergency Management Division will continue the use of social media and explore new technology as it becomes available

Funding: Staff time (operating funds)

2017 Progress: Social media is currently being utilized as well as the Fire Department's CodeRED Emergency Notification System.

19. Review City Code of Ordinances and make recommendations, if necessary to strengthen maintenance requirements of private stormwater management facilities, including structures controlling flow and prohibiting parking in swales.

Action: The Utility Department will collaborate with the Building Official, Code Compliance Division and others to make code revisions that would improve private stormwater management facilities attenuation.

Funding: Staff time (operating funds)

2017 Progress: Restrictions on driveway widths and impervious area have been implemented in the Land Development Regulations and included on details in Utilities Engineering Handbook.

20. *Ocean Inlet Drive and Shore Drive Stormwater Improvements* should be submitted as a future Utility Department Capital Improvement Project.

Action: Flood conditions have been observed within these rights-of-way, in part, due to debris in storm drains. Staff recommends purchasing different types

of grates that would help allow for more efficient drainage. The Utilities Department may consider this area for a future capital improvement project.

Funding: Capital Improvement Program Funds. Research the possibility of FEMA grant funds. This mitigation project will be submitted to the Palm Beach County Unified Local Mitigation Strategy (PBC LMS) Project Prioritization List (PPL).

2017 Progress: Ocean Inlet Drive Stormwater Improvements Project was completed in early 2017 with a total cost of \$100,000. There are not drainage issues in Shore Drive.

21. Implement the Utility Department *Lake Boynton Estates Neighborhood Utility Improvements* capital improvement plan (See Appendix N).

Action: Includes potable water mains and stormwater improvements; primarily swales and some exfiltration. The project is in the final design stage is planned to be bid by the end of the calendar year (2012) pending approval of the City, which is being done by procurement in the City Attorney's office.

Funding: Capital Improvement Program funds. Research the possibility of FEMA grant funds. This mitigation project will be submitted to the Palm Beach County Unified Local Mitigation Strategy (PBC LMS) Project Prioritization List (PPL).

2017 Progress: Project is completed.

22. Implement the Utility Department *Seacrest Corridor Neighborhood Utility Improvements* capital improvement project (See Appendix N).

Action: Similar to the Lake Boynton Estates project; primarily a water main project that will include some stormwater improvements such as swaling and exfiltration. It is planned to be out for bid by December 2012.

Funding: Capital Improvement Program funds. Research the possibility of FEMA grant funds. This mitigation project will be submitted to the Palm Beach County Unified Local Mitigation Strategy (PBC LMS) Project Prioritization List (PPL).

2017 Progress: Phase I completed in March 2016 with a total cost of \$10 Million. Selection of a design-built team for the Phase II implementation with an approximate budget of \$2.5 M is underway.

23. Ensure adherence to the City's Emergency Procedures Manual, particularly in the event of evacuation orders.

Action: A consultant has been hired by the City to update the Emergency Procedures Manual, which will be completed by the end of October 2012. Emergency Management Division personnel should review key components of the procedures before June 1st of each year.

Funding: Staff time (operating funds)

2017 Progress: The City's Emergency Procedures Manual that was adopted in 2013 is still in effect.

24. Complete the inventory of the City's drainage structures.

Action: This is a requirement of the City's National Pollutant Discharge Elimination System (NPDES) permit. As part of the 5-year permit cycle, 20% must be inventoried annually. To be completed by the Utility Department by March 2016.

Funding: Staff time (operating funds)

2017 Progress: This is an ongoing process to fulfill NPDES permit requirements. In addition, field data collection is ongoing to implement and populate the new Utilities GIS system.

25. Implement the following Utility Department Capital Improvement Plan stormwater project: *Stormwater Master Plan and Updates* – Review the status of the City's stormwater system and develop plans for its ongoing maintenance and improvement and ensure compliance with any NPDES regulations (See Appendix N).

Action: This is a "high priority" Capital Improvement Project scheduled to be completed in 2013. This will be a study of the Heart of Boynton area. Has to go to RFQ.

Funding: Capital Improvement Program funds. Research the possibility of FEMA grant funds.

2017 Progress: The Utilities Department implemented a Comprehensive Utilities Optimization Plan which includes a water, waste water and stormwater analysis and rate evaluation.

26. Encourage designation, protection, and maintenance of wetlands, mangroves and environmentally sensitive lands..

Action: The Army Corps of Engineers manages wetland ecosystems and requires permits for certain development activities. The Palm Beach County Department of Environmental Resources Management has no permit authority over jurisdictional wetland areas. All wetland areas claimed as jurisdictional by either the South Florida Water Management District (SFWMD) or the United States Army Corp of Engineers (ACOE) are exempt from the County's vegetation removal process; only native upland vegetation located outside of wetland boundaries are subject to permit. This recommendation is ongoing and is the responsibility of the City's Development Department. There are no plans to change the current approach.

Funding: Staff time (operating funds)

2017 Progress: Conservation overlays are currently a part of the City comprehensive plan and designated on the City's future land use map. This is ongoing as part of development approval process.

27. Encourage FEMA to update Flood Insurance Rate Maps (FIRM) to include base flood elevations in all Special Flood Hazard Areas (SFHA).

Action: FEMA is in the process of updating the County's FIRMs at this time. The Development Department will keep the City updated on the progress of the mapping.

Funding: Staff time (operating funds)

2017 Progress: The Federal Emergency Management Agency (FEMA) has recently developed new flood maps for the City of Boynton Beach which were effective on October 5, 2017. Flood maps are used as a basis for determining flood risks, building requirements and insurance premiums.

28. Increase the correction of localized drainage problems so that Level of Service standards are enhanced.

Action: The Utility Department will continue efforts to maintain, replace, and upgrade drainage features to minimize or eliminate localized drainage problems. The Director of the Utility Department shall submit records in August of each year to the Flood Mitigation Plan Task Force Chair outlining the previous year's accomplishments. This is reported annually to the Department of Environmental Protection.

Funding: Capital Improvement Program funds. Research the possibility of FEMA grant funds.

2017 Progress: The City report to FDEP on the MS4 - Annual Report the drainage improvements projects.

Completed in the previous year:

- Central Seacrest Corridor Utilities Improvements Project Phase I

Ongoing during current year:

- Central Seacrest Corridor Phase II
- North & South Roads
- Ocean Inlet Drive, Completed
- NE 20th Avenue
- Lakeside Garden

29. Require that installation of stormwater management facilities made necessary by new development is the responsibility of the developer.

Action: This is current policy and will continue as is. This activity is ongoing as the responsibility of the Utility Department.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

30. Identify City parks and unbuildable lots (as determined by the Development Department) that could be designated for permanent open space and encourage such designation where possible.

Action: This responsibility will be a collaboration of the Parks and Recreation Department, Development Department, and the Public Works Department.

Funding: Staff time (operating funds)

2017 Progress: City has a verbal contract with the Developer of the Riverwalk project to acquire approximately 5.76 acres of mangrove land on their parcel south of existing plaza. City will designate as a nature preserve and open space.

31. Consider areas for multiple uses that can be used for storage of floodwaters (retention/detention areas), such as ball fields, public rights of way, parks, and designated open space in locations that have flooding problems.

Action: This will be a joint responsibility of the Utility and Development Departments.

Funding: Staff time (operating funds)

2017 Progress: Evaluation is ongoing. Occasionally staff implements pumping of stormwater runoff to City Parks and Recreation facilities during storm events. No City parks have been designated as permanent open space over the past three years; acquisition of unbuildable lots is not economically feasible at this time.

32. The Development Department shall evaluate the building/site regulations of each zoning district and make recommendations for minimum open space requirements.

Action: The Development Department will be responsible to implement this activity.

Funding: Staff time (operating funds)

2017 Progress: The City is currently in the process of conducting a Land Development Regulation audit as part of the CRA Redevelopment Plan implementation. As part of the audit open space requirements will be reviewed and studied for potential changes.

33. Require new development that requires site plan approval to incorporate historical drainage patterns in the analysis of the required stormwater storage.

Action: This is current City policy and the collaboration between the Utility and Development Departments will continue as is.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

34. Encourage developing provisions for stormwater design management practices in low-impact development.

Action: The Utility and Development Departments have joint responsibility for this item.

Funding: Staff time (operating funds)

2017 Progress: This is being implemented on a voluntary basis through the Green Building Program.

35. Continue the City’s maintenance program to clear debris from stormwater drainage areas.

Action: The Utility Department will assure that this program is implemented and shall make the records available to the CRS Coordinator each year. This activity is ongoing and the City will continue its current approach.

Funding: Staff time (operating funds)

2017 Progress: This is being implemented.

36. As part of the City’s NPDES program, continue sediment control to prevent clogged drainage systems such as street sweeping, curb and gutter cleaning and planting vegetation on bare ground.

Action: This is current policy and the Public Works Department will continue the current approach..

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

37. Prioritize the reduction of repetitive loss properties through various means of mitigation, update repetitive loss forms, and strive to remove properties from the Repetitive Loss List.

Action: This is an ongoing activity that will continue as a top priority of the City’s Development Department, the results of which will be reported annually to the Flood Mitigation Task Force. This is current policy and will continue as is.

Funding: Staff time (operating funds)

2017 Progress: As there is limited funding to mitigate and acquire property, no mitigation activities have been completed on the City’s repetitive loss sites. City will continue to work on a case by case basis as funding opportunities arise.

- 38. Include notification of grants, loans, and service availability in all City media publications, seminars, and websites that pertain to flood mitigation.

Action: This item will become a part of the City’s Program for Public Information (PPI) and will be a joint collaboration between the City Manager’s Office and the Development Department.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

- 39. Provide information to residents, businesses, property owners on the purpose, importance, and proper maintenance of swales.

Action: This is an ongoing activity by the Utility Department and will continue the current approach.

Funding: Staff time (operating funds)

2017 Progress: The Utility Department continues to implement this.

- 40. Work with developers when redeveloping commercial or mixed-use sites along the Intracoastal Waterway by encouraging that they dedicate the easternmost portions of land granted as an easement or to be greenways for public access and use.

When redevelopment is proposed on private properties located along the Intracoastal Waterway, staff shall collaborate with the developers to encourage public access along the easternmost portion of the property (e.g., development of a greenway, pedestrian path, bikeway, etc.) by the granting of an easement or other legal means.

Action: This is an ongoing responsibility of the Development Department.

Funding: Staff time (operating funds)

2017 Progress: As part of the Riverwalk (Mixed Use) development approval the developer is required to grant the City a public access easement on their property adjacent to the intra-coastal waterway. This easement must be dedicated prior to issuance of building permits.

41. Consider City acquisition of repetitive loss and/or adaptation action area properties along the Intracoastal Waterway.

Action: This responsibility will be a collaboration of the City Manager's Office, the Development Department and the Legal Department.

Funding: Staff time (operating funds). Research the possibility of FEMA and other grant funding.

2017 Progress: This has not been implemented to date, considering the high cost entailed.

42. Collaborate with Florida Communities' Trust to assist with funds in acquiring properties in the Special Flood Hazard Area (SFHA).

Action: This responsibility will be a collaboration of the City Manager's Office, the Development Department and the Legal Department.

Funding: Staff time (operating funds) and grant trust funds.

2017 Progress: This has not been implemented to date, based on the changes with the City's FIRM maps. This item will be re-evaluated with the recent adoption of the new firm maps. On September 19, 2017 the City Commission approved by ordinance 17-029, the City's adoption of FEMA's Palm Beach County Flood Insurance Rate maps (FIRMs), effective October 5, 2017.

43. Collaborate with the Southeast Florida Regional Climate Change Compact as they make recommendations for land development standards with respect to low-lying coastal areas.

Action: The City will be asked to pass or approve by Commission resolution to adopt the Compact where feasible for the Boynton Beach community, saying we accept the Compact and will look to incorporate the feasible implementation strategies into the City's land development regulations and Comprehensive Plan. In early 2013 all of the municipalities will be presented with a resolution and will be asked by the County Administrators of Palm Beach, Broward, Miami-Dade and Monroe Counties to adopt. This will be the responsibility of the City Manager's Office.

Funding: Staff time (operating funds). Research grant funds for implementation.

2017 Progress: This has not been implemented to date, based on the impending changes with the City's FIRM maps. This item will be re-evaluated upon adoption of the new firm maps.

44. Educate citizens about and encourage them to consider the following forms of retrofitting for areas or buildings with major flooding issues:
- Install backflow valves on sewer systems
 - Elevation of structures by piers, posts and columns, and pilings
 - Create a secondary water barrier
 - Elevate the lowest floor above the 100-year flood level
 - Wet floodproofing (allowing water to enter uninhabited areas of the structure)
 - Dry floodproofing (sealing the structure to prevent flood waters from entering)
 - Levees and floodwalls (constructing a barrier around the structure to keep out flood waters)
 - Demolition (tearing down the structure and rebuilding with appropriate floodproofing techniques or relocating the structure)
 - Elevate the main breaker or fuse box

Action: This is an ongoing activity through education and outreach and is the responsibility of the Development Department.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

45. Encourage floodproofing techniques in order to preserve and revitalize neighborhoods.

Action: This is an ongoing activity through education and outreach and is the responsibility of the Development Department.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

46. Encourage property owners to use qualified hazard mitigation professionals to inspect building foundations and assess damage after flood events.

Action: FEMA, insurance agents, the State National Flood Insurance Program (NFIP) office and the City’s Development Department will provide contact information

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

47. Identify, inform, and encourage homeowners’ associations to install littoral/upland buffer plantings around lakes and retention areas.

Action: This will be a responsibility of the Development Department through education and outreach.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

48. Identify privately owned and public natural and beneficial areas in the City and consider expansion of the City’s properties that are designated natural and beneficial areas.

Action: The Development Department will implement this item. Recommendations will be presented to the Flood Mitigation Plan Task Force in its Task Force meetings.

Funding: Staff time (operating funds)

2017 Progress: City has a verbal contract with the Developer of the Riverwalk project to acquire approximately 5.76 acres of mangrove land on their parcel south of existing plaza. City will designate as a nature preserve and open space.

49. Maintain strong enforcement of South Florida Water Management District and Lake Worth Drainage District regulations pertaining to floodplain management.

Action: The Utility and Development Departments continue this current policy as is.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

50. Encourage individual property owners to pursue percolation-oriented drainage improvements using best management practices through outreach and education. Drainage that seeps into the soil, rather than being directed out to the ocean, provides multiple benefits. Not only does it mitigate flooding, but it also recharges the aquifer, enhances water quality, and reduces erosion.

Action: The Development Department will include recommendations pertaining to percolation-oriented drainage in the form of outreach and education. This activity will be ongoing.

Funding: Staff time (operating funds)

2017 Progress: Ongoing, projects typically include exfiltration trench and/or injections wells as part of their onsite storm water management systems. As we further implement the requirements of NPDES program point source discharges are being measured for nutrients and contaminants, as well as best management practices are provided to prevent future discharges.

51. Implement strict enforcement of best management practices for reducing erosion during development activity.

Action: The Development Department will be responsible to implement this activity. This is current City policy and should continue as is. An accounting of enforcement of this activity will be included in each annual evaluation of this Plan.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

52. Consider dune restoration programs.

Action: This activity will be the responsibility of the Parks and Recreation Department.

Funding: Staff time (operating funds). Research the possibility of grant funds.

2017 Progress: Further study and inventory of the dunes is required prior to any restoration efforts.

53. Research whether the State will provide free sand and sandbags to residents prior to impending floods.

Action: This will be the responsibility of the City's Emergency Management Division. Research the possibility of the State providing sandbags through the County for distribution at PODs.

Funding: Staff time (Operating funds)

2017 Progress: This has not been implemented as a free provision. The County Emergency Management Operations Center can order sand and sandbags if necessary.

54. Ensure optimal staffing of emergency management personnel to receive and respond to emergency events.

Action: This practice will continue as in the past, in accordance with Incident Command System (ICS) standards and ensuring adherence to the City's Emergency Procedures Manual.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

55. Integrate response to flooded homes with appropriate response organizations (CERT, American Red Cross, faith based organizations and other non-profit entities).

Action: The Emergency Management Division will contact appropriate response organizations at least 24 hours prior to anticipated hurricane or flooding event. During or immediately following the event, contact with these organizations will be made again to ensure integration of response in accordance with the City's Emergency Procedures Manual.

Funding: Staff time (operating funds)

2017 Progress: This is currently implemented during events that provide a warning period.

56. Identify all critical facilities located within SFHAs and make contingency plans for each, in the event of flooding.

Action: The City's Fire and Life Safety Division will collaborate with the Risk Management Department to identify all critical facilities located within the SFHAs and to make the recommended contingency plans by [date] of each year. A preliminary report will be presented to the Palm Beach County Local Mitigation Strategy and the Boynton Beach Flood Mitigation Task Force.

Funding: Staff time (operating funds)

2017 Progress: All critical facilities have been updated.

57. Continue to ensure that all new public buildings that serve first response and critical emergency/public needs, including record/data collection and communication centers/infrastructure, are located outside of flood zones or floodprone areas.

Action: The Development and Engineering Departments will be responsible for this activity and will continue the current policy as is.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

58. Annually update the list of nursing homes and smaller home care centers (Type 1 Group Homes) in the City and the priority list of critical facilities.

Action: The City's Fire Department completes this every year. This procedure will continue as is.

Funding: Staff time (operating funds)

2017 Progress: This is continuously updated.

59. Confirm that all nursing homes have an emergency plan.

Action: This is required every year by the City’s Fire Department and will continue the current procedure as is.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

60. Keep Special Registry List and share with CERT teams.

Action: This list is maintained by the City’s Fire Department and will continue its current approach.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

61. The Stormwater crew will keep a registry of problem areas that requires the use of vacuum trucks in the event of a flood event, including after regular business hours.

Action: This is current policy and will continue as is. The Stormwater Director will coordinate with the Fire and Life Safety Division.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

62. Explore funding opportunities to retrofit critical facilities to be more flood and wind resistant.

Action: This is the responsibility of the City Manager’s Office and is an ongoing policy that will continue as is.

Funding: Staff time (operating funds)

2017 Progress: No grant funding has been identified to date, but the City monitors grant opportunities on an ongoing basis.

63. Continue to advertise evacuation routes.

Action: This responsibility of the Emergency Management Department will continue as is through education and outreach.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

64. Post contact information so that citizens know how to contact FEMA post-flood.

Action: The Emergency Management Department shall ensure that the literature and announcements included in the City’s public information outreach includes this information. The City will continue this practice as is.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

65. Provide knowledgeable staff to assist citizens, before, during and after a flood event to help them understand their repair, rebuilding, flooding and mitigation options.

Action: The Building Official will coordinate this assistance based on staff availability and prioritized needs. This is a current City procedure and will continue as is

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

66. Assure annual distribution of printed copies of the *Boynton Beach Hurricane Survival Guide* in multiple languages at City Hall.

Action: This item will be the responsibility of the Emergency Management Department. Currently the guide is not provided in printed form due to budget constraints.

Funding: Research grant availability.

2017 Progress: The guide is provided online but is not available in print.

67. Post the *Boynton Beach Hurricane Survival Guide* and a link to the *Palm Beach County Hurricane Survival Guide* on the City’s website in a location that is easily accessed by the community. There are no plans to change this practice.

Action: This is current practice and will continue as is as the responsibility of the Emergency Management Department.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

68. Implement the City’s Program for Public Information (PPI), a copy of which can be found in the Appendix of this Plan.

Action: The Development Department shall be responsible to implement the City's Program for Public information and to report on its annual evaluation and revisions by October 1st of each year.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

69. Conduct an emergency procedures public outreach campaign (chambers, civic groups, etc.).

Action: The Emergency Management Department will continue this activity as is.

Funding: Staff time (operating funds)

2017 Progress: This continues to be implemented.

70. Continue to work with the City Housing Program to provide education to homebuyers regarding flood information.

Action: The Development Department will follow up with the Flood Mitigation Task Force annually on this responsibility by October 1st of each year.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.

71. The Community Rating System (CRS) program should sponsor an information session and invite the insurance industry, Florida League of Cities and other interested parties to distribute information on potential insurance premium discounts, provide information to contractors and homeowners on the risks of building in hazard-prone areas and mitigation, provide the public with Federal Emergency Management Agency (FEMA) floodplain maps and develop a list of techniques for homeowner self-inspection and implementation of mitigation activities.

Action: The Palm Beach County CRS Users' Group, of which the City of Boynton Beach is a member, will work with the CRS Program to implement this activity. Much of this information is distributed at the CRS Users' Group's Hurricane Expo which is held in June of each year.

Funding: Staff time (operating funds)

2017 Progress: 2016 and 2017 Yearly Boynton Beach Hurricane Fair.

72. Research if the realtor community has a hazard disclosure requirement for deed transfers, leases or other contracts for sale or exchange of property in flood hazard areas.

Action: This will be the responsibility of the Development Department.

Funding: Staff time (operating funds)

2017 Progress: For properties that are being acquired with mortgages, typically the mortgage company requires a flood map determination or elevation certificate to verify if property is located within a SFHA. Currently there are no requirements for realtors to research flood hazard information.

73. The City shall discourage hospitals, congregate living facilities for persons with special needs, nursing homes and the like from locating within Coastal High Hazard Area (CHHA) and shall encourage such existing facilities to relocate to safer locations within the City.

Action: This responsibility will be with the Development Department.

Funding: Staff time (operating funds)

2017 Progress: Ongoing.