

Memorandum



Date: May 23, 2022

To: Honorable Chairman Jose “Pepe” Diaz
and Members, Board of County Commissioners

From: Daniella Levine Cava
Mayor

A handwritten signature in blue ink that reads "Daniella Levine Cava".

Subject: Biscayne Gardens Report Related to the Creation of a Short-Term Plan and a Mid-Term Plan for Flooding and to Include all Funding Necessary to Commence the Implementation of the Plans in Fiscal Year 2022–23 - Directive No. 213136

On July 8, 2021, the Board of County Commissioners (Board) adopted Resolution No. R-668-21, sponsored by Commissioner Monestime, directing the County Mayor or County Mayor’s designee to conduct an engineering study related to flooding in the area of the County generally known as Biscayne Gardens, and more specifically, within the area bordered to the north by Northwest 167th Street; to the east by North Miami Avenue; to the south by Northwest 158th Street (east of Northwest 2nd Avenue) and Northwest 157th Street (west of Northwest 2nd Avenue); and to the west by Northwest 6th Avenue (the “study area”); to identify both short-term and long-term solutions to the problems that residents may be experiencing; and to prepare a report on the engineering study. On December 1, 2021, the Board accepted the County Mayor’s Biscayne Gardens Engineering Study Related to Flooding to Identify Short-Term and Long-Term Solutions.

On February 1, 2022, the Board adopted Resolution No. R-134-22, sponsored by Commissioner Monestime, directing the County Mayor or County Mayor’s designee to create a Short-Term Plan and a Mid-Term Plan for flooding mitigation in Biscayne Gardens, to commence the implementation of the plans in fiscal year 2022–23, to include all funding necessary to commence the implementation of the plans in the County Mayor’s proposed Fiscal Year 2022–23 budget, and to provide a report to be placed on an agenda of the Board within 90 days of the effective date of Resolution No. R-134-22.

Miami-Dade County’s Department of Regulatory and Economic Resources, Division of Environmental Resources Management (RER-DERM) conducts detailed analysis of the simulated performance of existing and planned stormwater infrastructure, with forecasts of short- and long-term sea level rise, for a broad range of design storm events and best management scenarios. This analysis is used to scope the County’s stormwater infrastructure short-, medium-, and long-term capital improvement projects. Over the years, RER-DERM and the Department of Transportation and Public Works (DTPW) have completed numerous projects in the Biscayne Gardens area to improve conditions. This area was originally developed years ago and prior to the adoption of current building standards. As redevelopment occurs, the County continues to implement improvements that capitalize on private investment to bring the entire area up to current standards and will continue to analyze conditions and implement improvements into the future.

RER-DERM has identified short- and mid-term strategies (to be implemented over the next five years) and long-term strategies (to be implemented over the next 10-30 years) in order to address infrastructure deficiencies and ameliorate chronic flooding conditions in the Biscayne Gardens area. The majority of the engineering strategies and projects identified include physical improvements in stormwater infrastructure downstream of the study area as shown in Figure 1 below.

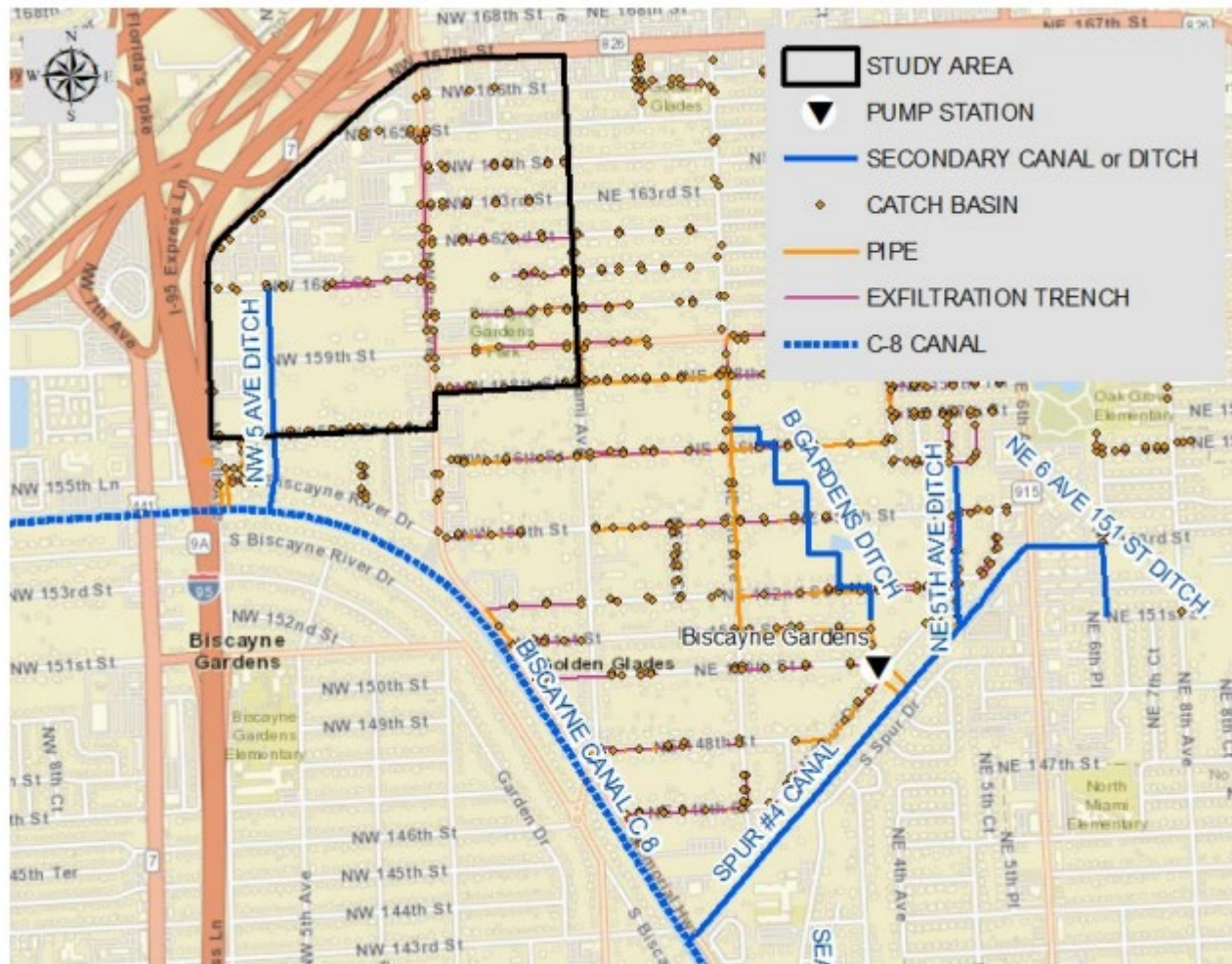


Figure 1. Study Area and Stormwater Infrastructure

Short- and Mid-Term Plans

The following short- and mid-term projects have been identified for implementation within the next three to five years, starting in Fiscal Year 2020-2021. All projects to improve drainage performance will include assessment and implementation of stormwater quality treatment and technologies as applicable:

Property Buyouts (Ongoing)

Miami-Dade County received funding in 2021 through the Federal Community Development Block Grant Disaster Recovery (CDBG-DR) Voluntary Home Buyout Program administered by the Florida Department of Economic Opportunity (DEO) Office of Disaster Recovery. This Board authorized the County Mayor or County Mayor’s designee to execute the subrecipient agreement with the DEO to provide block grant funding via Resolution No. R-560-21, approved on June 2, 2021. The Department of Transportation and Public Works (DTPW), Office of Resilience, and the Parks Recreation and Open Spaces Department, as well as other County Departments, collaborated on this grant. DTPW is responsible for overseeing these property buyouts and demolitions. The resultant vacant land will be used for public purposes as either a park or stormwater management area. Additionally, the grant provides relocation assistance to eligible residents.

The property located at 326 NE 152nd Street has been approved for funding under this grant. After purchase and demolition, this property may be used, at a minimum, as a green infrastructure feature to manage stormwater under certain flooding events. The estimated total cost for purchasing and demolishing this property is \$278,000. Buyout and demolition of the property is estimated to take approximately 24 to 36 months. Purchase and demolition of this property has been identified as part of the engineering strategies for the Biscayne Gardens area. DTPW estimates that non-reimbursable program management fees up to \$125,000.00 may be incurred. The Office of Resilience has set aside \$50,000.00 from the Resilient305 Strategy funded by the General Fund, and \$25,000.00 has been allocated from the Stormwater Utility, FY 2020-2021 adopted capital budget for all sites that will be used for stormwater management funded under this grant.

Biscayne Gardens PS (NE 150 St & Spur Drive) Improvements (Ongoing)

The scope of this project includes optimizing the existing Biscayne Gardens Pump Station conveyance infrastructure through new piping, interconnections, and discharge improvements into the Spur #4 Canal. Service area modeling, survey, design, permitting, bid, award, and construction are anticipated to take approximately 36 months. Survey, area modeling, and design for this project commenced in the current Fiscal Year (2021-2022). Total estimated cost for survey, area modeling, and design is estimated at \$150,000. Bid, award and construction is estimated at an additional cost of \$2 million, being budgeted for Fiscal Year 2022-2023. All project funding is/will be allocated from the Stormwater Utility capital budget.

Localized Dredging of Spur #4 Canal (To commence in Fiscal Year 2022-2023)

The scope of this project includes dredging of approximately 300 feet of the Spur #4 canal upstream of the 192-inch culvert discharging into the C-8 canal. The culvert is located at the discharge of the Spur #4 canal under Memorial Highway with inverts at -2.92’ NAVD88 (upstream) and -3.35’ NAVD 88 (downstream), respectively. Survey, design, permitting, bid, award, and construction are anticipated to take approximately 18 months. Survey is planned to commence in calendar year 2022. Estimated total cost for this project is \$400,000. Project funding is to be allocated from the Stormwater Utility, FY 2022-2023 capital budget.

In addition, RER-DERM has applied for a grant in partnership with the South Florida Water Management, Building Flood Resiliency with Gray and Green Infrastructure: C-8 Watershed. This grant includes elevating and enhancing canal banks throughout the basin, namely, the most vulnerable locations along the secondary system. The entire Spur #4 canal is included in this grant for storage and conveyance improvements. We anticipate announcement of grant awards in June 2022. Should the grant be awarded, Spur #4 canal will be one of the highest priorities, and work will include the limited dredging as scoped above as well, with project activities still commencing in Fiscal Year 2022-2023.

Long-Term Plan

The following long-term projects have been identified for implementation within the next ten to thirty years. All projects to improve drainage performance will include assessment and implementation of stormwater quality treatment and technologies as applicable:

Secondary Canal Storage and Conveyance Improvements in the C-8 Basin

The scope of this project includes elevating and enhancing canal banks throughout the basin, namely, the most vulnerable locations along the secondary system, and implementing conveyance improvements as needed in a total of six (6) secondary canals. Over 3 miles have been identified to have deficiencies that need to be corrected. Improvements to be made will follow the criteria for conveyance and storage capacity for a 25 YR / 72 HR 2060 future model with Sea Level Rise (SLR). RER-DERM has applied for a grant in partnership with the South Florida Water Management, Building Flood Resiliency with Gray and Green Infrastructure: C-8 Watershed. We anticipate announcement of grant awards in June 2022. Should the grant be awarded, project activities such as surveying and design may commence as early as the second half of Fiscal Year 2022-2023. If grant is not awarded, other grant opportunities may be pursued but project activities may be delayed until funding is available. Total cost is estimated at \$8.45 million. Project duration is estimated at a minimum of 36 months. Unless external funding opportunities are secured, the project will be phased out over a minimum of ten years, with funding (total or partial) to be provided from the Stormwater Utility capital budget.

Conveyance Improvements to the Biscayne Gardens Ditch

The scope of this project includes conveyance improvements to the Biscayne Gardens Ditch to restore capacity and facilitate maintenance. Survey, design, permitting, bid, award, and construction is anticipated to take approximately 24 months. Total estimated cost is \$3.2 million. Project funding is to be allocated from the Stormwater Utility capital budget. Grant and other external funding sources will be explored to fund this project.

New Stormwater Pump Stations Collecting Discharges from the Biscayne Gardens Neighborhood

Project Scope includes a new stormwater pump station to collect discharges from the northwest area of the Biscayne Gardens neighborhood west of NW 2nd Avenue. This pump station will utilize a wet well design, injection well, submersible pumps, and will discharge into the C-8 Canal, with discharge piping possibly running along NW 2nd Avenue. Research for a suitable property in the area will be needed. Property identification and purchase, modeling, survey, design, permitting, bid, award, and construction are anticipated to take approximately 48 months. Total costs are estimated at \$6 million. Project funding is to be allocated from the Stormwater Utility capital budget. Grant and other external funding sources will be explored to fund this project.

New Stormwater Pump Station Collecting Discharges from Biscayne Gardens Ditch

Project scope includes a new stormwater pump station to collect discharges from the Biscayne Gardens Ditch and collector piping. This pump station will utilize a wet well design, injection well, submersible pumps, and will discharge into the Spur #4 Canal, with discharge piping possibly running along NE 151st Street. Project may require property identification and acquisition, anticipated to take approximately 36 months. Service area modeling, survey, design, permitting, bid, award, and construction are anticipated to take an additional 36 months. Total costs are estimated at \$4 million. Project funding is to be allocated from the Stormwater Utility capital budget. Grant and other external funding sources will be explored to fund this project.

County Maintained Roadway Elevation Improvements

This project scope includes elevation improvements to roads within the study area that flood during a 10-year, 24-hour rain event. Service area modeling, survey, design, permitting, bid, award, and construction are anticipated to take approximately 48 months. These improvements are not anticipated to commence until redevelopment in the area allows for raising road elevations without causing negative impacts on single lots that do not meet the elevation standards that are currently in effect. Total estimated initial cost is \$5 million to be refined once the service area modeling is completed. Project funding is to be allocated from the County’s DTPW capital roadway budget. Grant and other external funding sources will be explored to fund this project.

Conclusion

Funding to initiate the projects identified under the short- and mid-term plans has been prioritized for approval starting in FY20-21. The projects identified under the long-term plan have been incorporated under the Stormwater Utility Long-Term Capital Improvement Plan.

In accordance with Ordinance No. 14-65, this report will be placed on the next available Board meeting agenda. If you have any questions or require additional information, please contact Rashid Z. Istambouli, P.E., Interim Assistant Director, Division of Environmental Resources Management in the Department of Regulatory and Economic Resources, at Rashid.Istambouli@miamidade.gov.

- c: Geri Bonzon-Keenan, County Attorney
- Gerald Sanchez, First Assistant County Attorney
- Jess McCarty, Executive Assistant County Attorney
- Office of the Mayor Senior Staff
- Lourdes M. Gomez, Director, Department of Regulatory and Economic Resources
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- Rashid Z. Istambouli, P.E., Interim Assistant Director, Division of Environmental Resources Management in the Department of Regulatory and Economic Resources
- Yinka Majekodunmi, Commission Auditor
- Jennifer Moon, Chief, Office of Policy and Budgetary Affairs
- Basia Pruna, Director, Clerk of the Board
- Eugene Love, Agenda Coordinator