

C4 R REFERRAL TO THE LAND USE AND SUSTAINABILITY COMMITTEE TO
DISCUSS THE NORTH BEACH WATER QUALITY AND PARK VIEW CANAL
REPORT.

Applicable Area:



COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission

FROM: Eric Carpenter, City Manager

DATE: February 3, 2025

TITLE: REFERRAL TO THE LAND USE AND SUSTAINABILITY COMMITTEE TO DISCUSS THE NORTH BEACH WATER QUALITY AND PARK VIEW CANAL REPORT.

RECOMMENDATION

The Administration recommends that the City Commission refer the North Beach Water Quality and Park View Island Canal report to the Land Use and Sustainability Committee for presentation and discussion.

BACKGROUND/HISTORY

At the December 13, 2023 City Commission meeting, item C7 L Resolution No. 2023-32852 (Attachment A) authorized the Administration to procure the services of Dr. Solo-Gabriele of the University of Miami (UM) to conduct a post-study after the implementation of short-term actions in North Beach, as they relate to the Park View Canal water quality improvement efforts and Action Plan. The item was sponsored by Commissioner Kristen Rosen Gonzalez.

At the March 13, 2024 City Commission meeting, item C7 N Resolution No. 2024-32954 (Attachment B) directed the Administration to prioritize, as part of the FY 2025 Budget process, funding for improvements to address the water quality concerns relating to the Park View Island Canal. The item was sponsored by Commissioner Alex J. Fernandez.

ANALYSIS

The City of Miami Beach is committed to maintaining and improving the quality of its waterways and protection of Biscayne Bay. The Administration continues to move forward with prioritized improvements funded through City Commission approval to address water quality concerns related to North Beach Water Quality and Park View Island Canal. The action plan includes above-ground sanitation, below-ground infrastructure improvements, canal dredging design and permitting evaluations and additional research conducted by Dr. Solo-Gabriele, water quality expert from the University of Miami. Despite these efforts, water sampling results continue to show a fecal indicator bacteria concentration that exceeds recreational water quality standards established by the Florida Department of Health.

The initial study completed in 2023 highlighted that rainfall is the main predictor of poor water quality in the canal, with sediments from the canal shoreline, the streets, and sediments in catch basins and shallow groundwater entering the canal from the 81-acre catchment area to the east. Despite rigorous sanitary sewer testing, the system including private connections is aging and could not be ruled out. Sanitary sewer upgrades have been made including closed-circuit television studies and lining the sewer lines from 73 to 76 Street as well as rehabilitated manholes where needed, including North Beach pump station wet well rehabilitations. Stormwater treatment to reduce litter is underway by retrofitting the current gravity stormwater system with advanced

water quality treatment devices with the North Beach Town Center Neighborhood Improvement Project planned to address additional aging infrastructure. The 2023 study also identified many additional sources contributing to degraded water quality, including exotic and feral animal feces, the homeless population, dog waste, litter, and leaking dumpster in commercial areas.

In addition to completed and planned infrastructure upgrades, the City has increased inspections and services. Code Compliance continues focusing on proactive patrols while enforcing the cleanup of pet waste, Parks & Recreation continues its roaming patrols, and Environment & Sustainability staff, alongside the Public Works Operations team continue to work with Homeless Outreach on their increased routine site visits. Sweeping and hand litter collection continue on Park View Island and additional pet waste dispensers were installed in high-traffic areas.

The new Phase II data collection by UM has been completed and is being compiled and analyzed in the form of a final report. The following has been conducted as part of the study:

- Collected stormwater before catch basins (catch system under grate before basin) to determine how much fecal bacteria is coming from the streets vs groundwater.
- Sampled groundwater directly utilizing direct push technology for samples of upper groundwater to determine the background levels of fecal bacteria.
- Tested within catch basins with biomarker source tracking (i.e. bird, dog, human) to determine how much fecal bacteria is coming into the system and from which source.
- Analyzed groundwater elevations to tie the elevation of the canal to groundwater, along with a comparison to pipe elevations.
- Reviewed and updated the City's historical data with information and testing that has been made available since the Phase I study concluded, from both Surfrider's Bluewater Task Force and the City's datasets.

The final report is due to the City by the end of January 2025. The results of the study will be shared once the final report is completed for discussion at the Land Use and Sustainability Committee.

FISCAL IMPACT STATEMENT

The UM study was funded for \$75,000 and the results will be presented to LUSC Committee Members to discuss next steps and findings.

Does this Ordinance require a Business Impact Estimate? (FOR ORDINANCES ONLY)

If applicable, the Business Impact Estimate (BIE) was published on:

See BIE at: <https://www.miamibeachfl.gov/city-hall/city-clerk/meeting-notices/>

FINANCIAL INFORMATION

CONCLUSION

The Administration recommends that the City Commission refer the North Beach Water Quality and Park View Island Canal report to the Land Use and Sustainability Committee for presentation and discussion.

Applicable Area

North Beach

**Is this a “Residents Right to Know” item,
pursuant to City Code Section 2-17?**

Yes

**Is this item related to a G.O. Bond
Project?**

No

**Was this Agenda Item initially requested by a lobbyist which, as defined in Code Sec. 2-481,
includes a principal engaged in lobbying?** No

If so, specify the name of lobbyist(s) and principal(s):

Department

Environment and Sustainability

Sponsor(s)

Commissioner Kristen Rosen Gonzalez

Co-sponsor(s)

Commissioner Alex Fernandez
Commissioner Laura Dominguez
Commissioner Tanya K. Bhatt

Condensed Title

Ref: LUSC - NB Water Quality and Park View Canal Report. (KRG/AF/LD/TB) EN

Previous Action (For City Clerk Use Only)

MIAMI BEACH

COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission
FROM: Rafael A. Paz, City Attorney
DATE: December 13, 2023

SUBJECT: A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, AUTHORIZING THE CITY ADMINISTRATION TO PROCURE THE SERVICES OF DR. SOLO-GABRIELE TO CONDUCT A POST-STUDY ON THE WATER QUALITY IN THE PARK VIEW ISLAND CANAL, IN ORDER TO DETERMINE WHETHER THE WATER QUALITY HAS IMPROVED FOLLOWING THE COMPLETION OF PROPOSED SHORT-TERM REMEDIAL MEASURES; AND FURTHER, PROVIDING THAT THE TOTAL AMOUNT OF THE POST-STUDY SHALL NOT EXCEED \$75,000.

ANALYSIS

The proposed Resolution was prepared at the request of the sponsor, Vice-Mayor Kristen Rosen Gonzalez.

SUPPORTING SURVEY DATA

N/A

FINANCIAL INFORMATION

The fiscal impact, if the study is authorized by the City Commission, shall not exceed \$75,000.

Is this a "Residents Right to Know" item, pursuant to City Code Section 2-14?

No

Does this item utilize G.O. Bond Funds?

No

Legislative Tracking

Office of the City Attorney

Sponsor

Vice-Mayor Kristen Rosen Gonzalez

ATTACHMENTS:

Description

▯ Resolution

RESOLUTION NO. _____

A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, AUTHORIZING THE CITY ADMINISTRATION TO PROCURE THE SERVICES OF DR. SOLO-GABRIELE TO CONDUCT A POST-STUDY ON THE WATER QUALITY IN THE PARK VIEW ISLAND CANAL, IN ORDER TO DETERMINE WHETHER THE WATER QUALITY HAS IMPROVED FOLLOWING THE COMPLETION OF PROPOSED SHORT-TERM REMEDIAL MEASURES; AND FURTHER, PROVIDING THAT THE TOTAL AMOUNT OF THE POST-STUDY SHALL NOT EXCEED \$75,000.

WHEREAS, the City of Miami Beach is committed to maintaining and improving the quality of its waterways and Biscayne Bay as they are critical to environmental, economic, and recreational prosperity, and to the health, safety, and welfare of the citizens of the City of Miami Beach; and

WHEREAS, since 2020, following a sanitary sewer overflow caused by a contractor, the water quality at the Park View kayak launch and canal has contained chronically elevated bacteria levels, and a "No Contact Advisory" has been issued for the Park View Canal Kayak Launch (the "Canal") location since that time; and

WHEREAS, the City implemented various strategies to isolate potential sanitary sewer leaks, including multiple dye testing, deep cleaning of the stormwater lines, water quality testing throughout the stormwater system, sediment sampling in the canal, CCTV inspections, and smoke testing to determine potential illegal cross connections between private properties sewer lines and the City's stormwater system; and

WHEREAS, the City performed advanced gene biomarker analysis to identify fecal indicators for humans, dogs, or birds at locations within the canal, and the results of the analysis in 2020 and 2021 indicated that fecal coliform from dogs and birds were present at high concentrations in samples; and

WHEREAS, the City retained ESciences, a third-party consultant specializing in environmental investigations, to conduct a thorough analysis of the data which indicated more studies were necessary to draw conclusions in the data set, as trends could not be identified; and

WHEREAS, in light of the continued elevated levels, the City procured the services of Dr. Solo-Gabriele, Associate Dean for the University of Miami College of Engineering, a global water quality expert in evaluating microbes in water and sediments; and

WHEREAS, Dr. Solo-Gabriele and the University of Miami team conducted a four-month sampling study to help determine the geographic or point-source(s) of bacteria; and

WHEREAS, the study discovered that freshwater surface layer of the canal had higher levels of bacteria, and that rainfall was the main predictor of poor water quality in the canal, with sediments from the canal shoreline, the streets, and sediments in catch basins, and shallow groundwater entering the canal from the 81-acre catchment area to the east and despite rigorous sanitary sewer testing, the system including private connections is aging and cannot be ruled out; and

WHEREAS, the study identified many sources contributing to degraded water quality including exotic and feral animal feces, the homeless population, dog waste, litter, and leaking dumpsters in commercial areas; and

WHEREAS, City staff from several Departments have worked to address many of these findings by providing an increased level of services, and have developed an action plan that combines the study recommendations with actions that include both funded and unfunded items; and

WHEREAS, there are several impactful short-, mid-, and long-term recommended actions that include dredging within the Park View Canal to increase flushing and target stormwater and sanitary sewer infrastructure improvements; and

WHEREAS, following the completion of proposed short-term remedial measures to improve the water quality in the Canal, the Mayor and City Commission wish to authorize the City Administration to procure the services of Dr. Solo-Gabriele to conduct a post-study on the water quality in the Canal in order to determine whether the water quality has improved, provided that the total amount of the study shall not exceed \$75,000.

NOW, THEREFORE, BE IT DULY RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, that the Mayor and City Commission hereby authorize the City Administration to procure the services of Dr. Solo-Gabriele to conduct a post-study on the water quality in the Park View Island Canal in order to determine whether the water quality has improved following the completion of proposed short-term remedial measures; and further, provide that the total amount of the post-study shall not exceed \$75,000.

PASSED AND ADOPTED this ____ day of _____, 2023.

ATTEST:

Steven Meiner, Mayor

Rafael E. Granado, City Clerk

(sponsored by Vice-Mayor Kristen Rosen Gonzalez)

APPROVED AS TO
FORM & LANGUAGE
& FOR EXECUTION

City Attorney

12-4-23

Date

MIAMI BEACH

COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission
FROM: Rafael A. Paz, City Attorney
DATE: March 13, 2024

SUBJECT: A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, DIRECTING THE ADMINISTRATION TO PRIORITIZE, AS PART OF THE FY 2025 BUDGET PROCESS, FUNDING FOR IMPROVEMENTS TO ADDRESS THE WATER QUALITY CONCERNS RELATING TO THE PARK VIEW ISLAND CANAL.

BACKGROUND/HISTORY

Was this Agenda Item initially requested by a lobbyist which, as defined in Code Sec. 2-481, includes a principal engaged in lobbying? No

If so, specify name of lobbyist(s) and principal(s): N/A

ANALYSIS

The attached Resolution was prepared at the request of the sponsor, Commissioner Alex Fernandez.

SUPPORTING SURVEY DATA

N/A

FINANCIAL INFORMATION

The sponsor of this item requests that the Administration be prepared to address the fiscal impact of this proposed measure as part of the FY2025 annual budget process.

Is this a "Residents Right to Know" item, pursuant to City Code Section 2-14?

No

Does this item utilize G.O. Bond Funds?

No

Legislative Tracking

Office of the City Attorney

Sponsor

Commissioner Alex Fernandez

ATTACHMENTS:**Description**

- Resolution

RESOLUTION NO. _____

A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, DIRECTING THE ADMINISTRATION TO PRIORITIZE, AS PART OF THE FY 2025 BUDGET PROCESS, FUNDING FOR IMPROVEMENTS TO ADDRESS THE WATER QUALITY CONCERNS RELATING TO THE PARK VIEW ISLAND CANAL.

WHEREAS, the City of Miami Beach is committed to maintaining and improving the quality of its waterways and Biscayne Bay as they are critical to environmental, economic, and recreational prosperity, and to the health, safety, and welfare of the citizens of the City of Miami Beach; and

WHEREAS, following a sanitary sewer overflow caused by a contractor in March of 2020, the high bacteria levels did not decrease to meet State parameters, and a "No Contact Advisory" has been issued for the Park View Canal Kayak Launch location since that time; and

WHEREAS, the City implemented various strategies to isolate potential sanitary sewer leaks, including multiple dye testing, deep cleaning of the stormwater lines, water quality testing throughout the stormwater system, sediment sampling in the canal, CCTV inspections, and smoke testing to determine potential illegal cross connections between private properties sewer lines and the City's stormwater system; and

WHEREAS, the City performed advanced gene biomarker analysis to identify fecal indicators for humans, dogs, or birds at locations within the canal, and the results of the analysis in 2020 and 2021 indicated that fecal coliform from dogs and birds were present at high concentrations in samples; and

WHEREAS, the City retained ESciences, a third-party consultant specializing in environmental investigations, to conduct a thorough analysis of the data which indicated more studies were necessary to draw conclusions in the data set, as trends could not be identified; and

WHEREAS, in light of the continued elevated levels, the City procured the services of Dr. Solo-Gabriele, Associate Dean for the University of Miami College of Engineering, a global water quality expert in evaluating microbes in water and sediments; and

WHEREAS, Dr. Solo-Gabriele and the University of Miami team conducted a four-month sampling study to help determine the geographic or point-source(s) of bacteria; and

WHEREAS, the study discovered that freshwater surface layer of the canal had higher levels of bacteria, and that rainfall was the main predictor of poor water quality in the canal, with sediments from the canal shoreline, the streets, and sediments in catch

basins, and shallow groundwater entering the canal from the 81-acre catchment area to the east and despite rigorous sanitary sewer testing, the system including private connections is aging and cannot be ruled out; and

WHEREAS, the study identified many sources contributing to degraded water quality including exotic and feral animal feces, the homeless population, dog waste, litter, and leaking dumpsters in commercial areas; and

WHEREAS, a community workshop was held in North Beach on January 24, 2023, and the draft final report with the study's recommendations was released via Letter to Commission (LTC) and on MBRisingAbove.com on January 23, 2023, for public comment through February 24, 2023; and

WHEREAS, City staff from several Departments have worked to address many of these findings by providing an increased level of services, and have developed an action plan that combines the study recommendations with actions that include both funded and unfunded items; and

WHEREAS, several impactful short-, mid- and long-term recommended actions were identified that include dredging within the Park View Canal to increase flushing and targeted stormwater and sanitary sewer infrastructure improvements; and

WHEREAS, the Environment and Sustainability Department (the "Department") was allocated \$500K in funding in FY 2023 for Phase 1 of Park View Canal dredging, which includes for planning, design, and permitting; and

WHEREAS, the Department has procured and negotiated this work with a selected consultant and FY 2024/2025 tasks include pre-application meetings with environmental regulatory agencies, bathymetric survey, geotechnical analysis, hydraulic/flushing analysis, DERM/FDEP/ACOE permit application preparation, response to requests for additional information and permit issuance, construction plans and technical specifications, determination of probable cost to complete, and prepare bid package or assist the CMB in preparation; and

WHEREAS, the Department was allocated \$2 million in the FY 2024 - 2028 Capital Budget for Phase 2 of Park View Canal dredging, with construction anticipated to be completed in FY 2026/2027; and

WHEREAS, the Public Works Department was allocated \$510,000 in FY 2023 funds and completed pipe lining to 95% of the gravity sanitary sewer pipes and 98% of the manholes in Park View Island, and lining of Pump Station No. 23; and

WHEREAS, the Public Works Department was allocated a total of \$2.5 million in FY 2024 for rehabilitation of manholes and additional pipe lining in the area east of Parkview Island (from 72nd St to 75th St), which contributes to the Park View system, lining of Pump Station No. 23, and 250 linear feet of force main replacement at Pump

Station 19 is anticipated to be completed in FY 2024; and

WHEREAS, the Public Works Department completed Park View Extended Area in January 2024, that consisted of lining every single pipe except a few that were in great shape, which addressed all manholes needed rehabilitation; and

WHEREAS, the Public Works Department was allocated \$200K in FY 2023 for design and permitting and \$2M for construction to retrofit existing gravity stormwater system with water quality treatment devices to minimize litter and sediments from entering the waterway, anticipated to be completed in FY 2025; and

WHEREAS, the North Beach Town Center-North Shore D Neighborhood Improvement Project will include design and replacement of the stormwater and sanitary sewer infrastructure in the catchment area; this would include outfall relocations and water quality treatment pump stations; and

WHEREAS, on December 13, 2024 the City Commission authorized the City Administration to procure the services of Dr. Solo-Gabriele to conduct a post-study on the water quality in the Park View Island Canal, in order to determine whether the water quality has improved following the completion of proposed short-term remedial measures; and further, providing that the total amount of the post-study shall not exceed \$75,000; and

WHEREAS, the Environment and Sustainability Department has worked with Dr. Solo-Gabriele to finalize the scope of services for the study planned to be conducted during the summer of 2024.

NOW, THEREFORE, BE IT DULY RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, that the Mayor and City Commission hereby direct the Administration to prioritize, as part of the FY 2025 budget process, funding for improvements to address the water quality concerns within Park View Island Canal.

PASSED AND ADOPTED this ____ day of March 13, 2024.

ATTEST:

Steven Meiner, Mayor

Rafael E. Granado, City Clerk

(sponsored by Commissioner Alex J. Fernandez)

APPROVED AS TO
FORM & LANGUAGE
& FOR EXECUTION

City Attorney

2-29-24

Date