




OFFICE OF THE CITY MANAGER

LTC #114-2026

LETTER TO COMMISSION

TO: Honorable Mayor Steven Meiner and Members of the City Commission

FROM: Eric Carpenter, City Manager 

DATE: March 17, 2026

SUBJECT: **UPDATE ON THE IMPLEMENTATION OF “OPERATION CLEAN WATER” PROGRAM - #17**

The purpose of this Letter to Commission (LTC) is to provide the Mayor and City Commission with a summary of staff’s efforts to date, as it relates to “Operation Clean Water,” adopted on March 19, 2025, by Resolution No. 2025-33559.

At the July 10, 2025 meeting of the Land Use and Sustainability Committee (LUSC), City staff provided an update on the North Beach Water Quality and Park View Canal Report. The discussion concluded with a motion, directing the Administration to provide weekly updates on the “Operation Clean Water” efforts at the Park View Canal, with a focus on Biscayne Beach Elementary hotspots, associated lateral pipe-lining, above-ground cleanliness (alleyways, street sweeping, pressure washing), and homeless outreach. At the September 11, 2025 LUSC meeting, Committee members made a motion to move the item to the City Commission for discussion, with a favorable recommendation to: 1) Authorize an independent, third-party review of the Sanitary Sewer Pump Station 23; 2) Expand the monthly water quality study to authorize and fund weekly water testing in Park View Canal; 3) Expedite the comprehensive infrastructure study for North Beach; and to maintain Park View Canal as a standing item on the Committee’s agenda for regular updates.

At the direction of the City Commission as part of Operation Clean Water, the City of Miami Beach entered into a formal agreement with the University of Miami (UM) in August of 2025 for the creation of an Ultraviolet Sanitization Pilot Project with the objective of evaluating whether street cleaning can reduce levels of enterococci entering the stormwater system. The pilot project aimed to clean the test area, 73rd Street (a documented street level enterococci “hot spot,”) by increasing the frequency of mechanical street sweeping activities, remove visible debris and fecal deposits manually, and the use of ultra-violet (UV) light, an environmentally friendly technology that cleans without leaving a chemical residue, to disinfect street surfaces. The pilot project’s cleaning and testing phases were completed on October 17, 2025. The final report was shared with the City on January 30, 2026, and reviewed for statistically significant results, recommendations, and next steps. Key findings in the report indicate enterococci levels are very high on untreated surfaces (streets and sidewalks); cleaning of these surfaces reduces fecal bacteria concentrations, particularly with repeated treatments. Street sweeping achieves a material, basin-scale reduction, and adding sidewalk sweeping extends the benefit, especially under tree canopy hotspots. The key purpose of the study, however, was to evaluate the effectiveness of UV technologies, and while the pilot project reveals the practice could be effective in theory or principle, there is significant engineering needed before the technology can be deployed in a meaningful way. There are critical real-world limitations like street/sidewalk roughness, UV lamp angle, and obstructions

like signposts and benches which all lead to non-uniform exposure, and hence, variability and limited statistical significance in this short trial. Key study recommendations include the continuation of aggressive industrial street sweeping, the enforcement of the street parking schedule in North Beach, instituting sidewalk cleanings (i.e. hotspot targeting to prioritize segments with heavy bird activity and low sunlight,) and exploring further development of UV technology for its potential widespread implementation at the city scale. The Report 'EXHIBIT – B' was transmitted to the City Commission through the Letter to Commission LTC# 081-2026, UPDATE ON THE IMPLEMENTATION OF "OPERATION CLEAN WATER" PROGRAM - #16, dated February 27, 2026.

On August 8, 2025, the pipe-lining contractor, Vortex Infrastructure Services, LLC (Vortex), mobilized at Biscayne Beach Elementary and began cleaning lateral lines and performing closed-circuit television (CCTV) inspections through existing sewer system access points. The scope of work that was successfully performed by Vortex included the cleaning of 1,320 LF of pipe, the lining of approximately 1,100 LF of pipe, the installation and/or replacement of 12 cleanouts, the performance of 5 point-repairs due to collapsed pipes, rebar obstructions, or cleanout complications, and the plugging off of cleanout 1B (CO1B) in the School's courtyard. All work was coordinated with the Miami-Dade County School Board and Biscayne Beach Elementary representatives.

On Saturday, October 4, 2025, a sewer force main break which resulted in sewage being released onto the school grounds and into the Tatum Waterway near Park View Canal, was reported by a stakeholder on the grounds of Biscayne Beach Elementary. Public Works Operations staff promptly responded to the site and successfully bypassed the flows, stopping the overflow. Repairs were performed, the pipe was placed back into service, and normal pumping operations resumed. Miami-Dade County Environmental Resources Management (DERM) and the Florida Department of Environmental Protection (FDEP) were notified the same day, in accordance with County and State Code and City reporting protocols. Once the work was completed, Public Works' Operations staff returned to the site to thoroughly clean and disinfect the area, including all affected stormwater systems, and restored the damaged sod and court. An Emergency Purchase Authorization has been signed for the performance of subaqueous horizontal directional drilling services from Hawthorne Avenue, under the Tatum Waterway, to the west end of 75th Street, to connect Pump Station #24 to Pump Station #23. A competitive bid process was conducted, and Amici Engineering Contractors was determined to be the lowest responsive, responsible bidder. A purchase order has been issued, and sixty percent design drawings are currently under internal review. The contractor has initiated the pre-application permit process with the respective local and State agencies, and the Public Works Department is scheduling a meeting with School Board representatives, including the School Board's Building Department in order to brief them on the emergency force main replacement project's scope, schedule, permit requirements, and Maintenance of Traffic (MOT) work.

Nanobubble technology was identified and reviewed by the Environment and Sustainability Department, Public Works Departments, and the City Manager's Office as a viable technology for use in the Park View Canal. The use of nanobubbles can greatly improve water quality in the canal by using special generators to create tiny bubbles (less than 200 nanometers in size) that stay suspended in water for a long period of time to help dissolve gases like oxygen, more effectively in water. This helps to accelerate various physical, chemical, and biological processes, and it can prevent the buildup of biofilm and scale in the water. These processes also help clean the water by promoting the breakdown of microbial contaminants, reducing harmful pathogens, algal growth, and bad odors, ultimately improving overall water quality. At the request of the City Commission and the subsequent Budget Hearing, staff were directed to explore an initial short-term project to test how the technology works within the Park View Canal setting and to evaluate the impact of

the technology, which requires design and permitting from environmental regulatory agencies. The Consultant Service Order for dredging was updated and expanded to include nanobubbles design and permitting. TYLin, the consultant, held the interdepartmental kickoff meeting on January 7, 2026, following receipt of the change order. Since the kick-off meeting, the consultant has been conducting site visits to determine the best possible placement of the technology to avoid impacts to resources such as the mangroves surrounding the canal, preparing permit application materials including a water quality monitoring plan and technical specifications, developing engineer drawings, and holding pre-application meetings with the regulatory agencies (including the Florida Department of Environmental Protection and the United States Army Corps of Engineers). The first draft of engineering drawings was completed by the consulting engineer on Thursday, February 26, 2026 for review by the Environment and Sustainability Department. Staff provided comments back on Wednesday, March 4, 2026. It is anticipated that permit applications will be submitted to the agencies by the end of March 2026. A six-month timeframe is anticipated for design and permitting, and TYLin additionally advised that the minimum short-term pilot project envisioned at this time is one-year. The upcoming construction phase, which includes customized equipment and activation, will require procurement and funding. Additionally, the design process is underway for dredging as a potential option to aid in the natural flushing of the waterway.

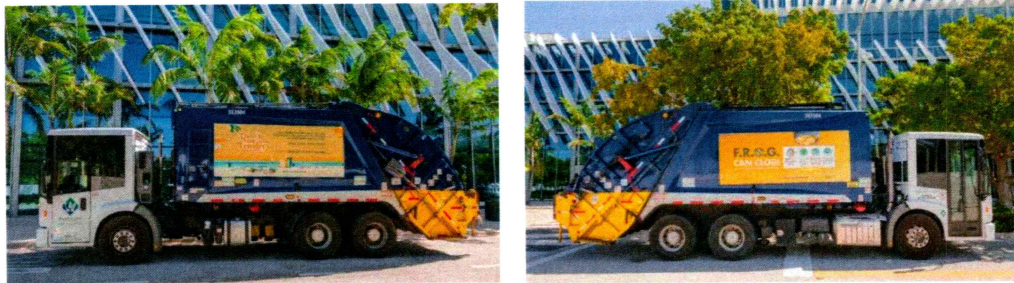
At the September 17, 2025 City Commission meeting, a motion was passed to move forward with and authorize funding for weekly water testing at up to five locations within Park View Canal. At the September 30, 2025 City Commission Budget Meeting, \$21,000 was approved and added to the Public Works' Stormwater budget for FY26 to fund the sampling effort. The Environment and Sustainability and Public Works Departments obtained a proposal and executed a purchase order for the Miami-Dade County sampling contractor, Eurofins Environment Testing, on November 14, 2025, and the weekly sampling began on Thursday, November 20, 2025. Eurofins Environment Testing is a certified laboratory utilized by the Miami-Dade County Surface Water Quality Monitoring Program for water quality sampling. The sampling map was developed by the Environment and Sustainability Department, drawing on known hotspot locations, publicly accessible shorelines, and input from Dr. Helena Solo-Gabriele, Associate Dean, University of Miami College of Engineering. There may be an opportunity to adjust sampling points at a later date to include sampling for additional areas and to collect unique data points. Sampling results (CMB Results) for enterococci since the previous LTC are attached as 'EXHIBIT – A', and the table also includes a column for Surfrider Foundation's Miami Chapter Blue Water Task Force (BWTF) results for water samples they collect at the Park View Canal kayak launch as requested by the City Commission.

There are varying standards for enterococci in marine waters and they are dependent on factors such as the classification of a water body, flushing rates, and proposed use of the waterways (i.e. recreation type). The Florida Department of Health (FDOH) Healthy Beaches standard for enterococci is 70 MPN/100mL, the Florida Department of Environmental Protection (FDEP) standard for enterococci in Class III Waters is 130 MPN/100mL, and the United States Environmental Protection Agency (EPA) standard for enterococci for kayaking in calm waters is 371 MPN/100mL.

Initial results have demonstrated significant spikes in fecal bacteria levels within the canal after rain events, particularly during January, further reinforcing the results of the two UM reports on water quality within the canal being driven by stormwater carrying street-level pollutants into the gravity stormwater system. Dr. Solo-Gabriele is overseeing a project with her Spring 2026 semester undergraduate students, at no-cost to the City, to evaluate the most recent results from the weekly testing and identify trends in the data such as rain and tide. The final class presentation for this class project is expected in May 2026. The sampling map is as follows:



DERM issued a Class II permit for seven Downstream Defender hydrodynamic separator/water quality structures on Friday August 1, 2025, allowing the City to move forward with the final design and the procurement process. Construction is scheduled to commence in the first quarter of 2026. On December 9, 2026, Governor DeSantis issued a press release to announce grant awards for Biscayne Bay Water Quality Improvement Grants. The City of Miami Beach was selected as a recipient of one of eight grants, in the amount of \$426,750 to account for the construction of the Downstream Defenders along Park View Canal. In the meanwhile, routine maintenance efforts for the existing stormwater structures from 72nd to 77th Streets, between Dickens Avenue and Collins Avenue remain ongoing. The Public Works and Communications Departments worked together on the design and copy of the “FROG can Clog” and “Don’t Grease the Streets” public outreach to decrease contamination to the Bay. As part of the outreach campaign, both designs were displayed on the side of three waste collection trucks. Below are photographs of two of them:



Stormwater drain markers were ordered and placed throughout Parkview Island and Parkview extended area (72nd Street – 76th Street) at stormwater inlets. Installation of the drain markers at approximately 100 locations was completed during the week of December 15, 2025. Below is a sample of the markers installed:



The Sanitation Division continues to provide mechanical and hand-sweeping crews in the Park View area three (3) times per week (Monday, Wednesday, and Friday). The Multihog machine operates on alternating days (Tuesday, Thursday, and Saturday), focusing on alleyways between 73rd and 76th Streets. Eleven (11) doggie-bag dispensers (which are refilled twice a week) were installed in the area. The litter collection service frequency in Crab Alley has increased from twice to three times per week.

The Homeless Outreach Services Team continues to visit the area. If individuals are found, support services are offered to assist them.

Code Compliance continues to conduct weekly walk-throughs and inspections to check for sanitation issues such as illegal dumping, overflowing dumpsters, and trash in the alleys in the North Beach watershed area. All observed violations result in the issuance of a citation for the creation of a health hazard/nuisance.

The Sanitary Pump Station #23 Assessment is being conducted by CHA, which is one of the City's consultants for Water and Sewer related work. The assessment will take place over the course of 90 days and will include the following tasks: Data Collection, Field Investigations, Site Analysis, and Adjacent Infrastructure Analysis. The Sanitary Pump Station #23 Assessment project was approved by the Procurement Department and a Notice-to-Proceed was given to CHA to start working on the study. During the project's site visit and kick-off meeting on December 8, 2025, CHA and the Public Works Department inspected all aspects of the pump mechanical room well and control/electrical room. Both parties further discussed past efforts of rehabilitation that have been done to Sewer Pump Station #23 and rehabilitation efforts done on the sewer system in the area. The site visit was finalized by an inspection of the pump station site and inspection of the force main aerial crossing located at Bay Drive bridge, and the force main aerial crossing located at the 71st Street bridge.

CHA has officially completed the Adjacent Infrastructure Analysis, which reviewed all sanitary and stormwater infrastructure adjacent to, and near Pump Station #23 which has the potential to affect the water quality in the Parkview Canal. Public Works will examine the findings when CHA submits their first draft of the Analysis and the Technical Memorandum for review.

CHA delivered to Public Works the first draft of the Pump Station #23 Study and Adjacent Infrastructure Analysis on January 20, 2026. Staff reviewed the report and provided comments to the consultant. A follow-up meeting with CHA to go over the comments was held on February 4, 2026. CHA is currently addressing comments from the February 4, 2026 meeting with Public Works, and will be submitting a final draft during the week of March 16, 2026.

The City initiated the North Beach Infrastructure Analysis project with the environmental engineering consulting firm Hazen and Sawyer. The purpose of this project is to conduct a comprehensive water and sewer hydraulic analysis for planned development in the North Beach area. In February 2025, the commission adopted Resolution 2025-33524, accepting the FERC recommendation to consider funding for a comprehensive infrastructure study for North Beach as part of the FY 2026 budget process. The City was urged to expedite the North Beach Infrastructure Analysis in September 2025 as part of the due diligence following the review of the Park View Canal Report and following concerns around sanitary sewer Pump Station #23, located in North Beach. The purpose of this project is to analyze the current conditions of the water and sewer infrastructure in North Beach and to evaluate the significance of increases in FAR in North Beach, like for the Deauville Hotel. The analysis will include known developments in the Town Center and other developments identified by the City. This project kicked off on February 24, 2026, between the staff and consultant. Staff is currently fulfilling data requests for the modeling effort, which is anticipated to take approximately six months. The final deliverable will be a technical memorandum.

For more information, contact Rodney Knowles, Assistant Public Works Director at RodneyKnowles@miamibeachfl.gov.


DM/JN/RK

EXHIBIT – A

Site Name	CMB Collection Date/Time	CMB Results MPN/100mL	BWTF Collection Date/Time	BWTF Results MPN/100mL
BBE Outfall	2/19/26 10:10 AM	467		
75th Street End	2/19/26 10:13 AM	288		
Kayak Launch	2/19/26 10:15 AM	30	2/19/26 11:15 AM	97
73rd Street	2/19/26 10:20 AM	135		
Bonita Drive	2/19/26 10:25 AM	30		
BBE Outfall	2/26/26 12:40 PM	173		
75th Street End	2/26/26 12:35 PM	457		
Kayak Launch	2/26/26 12:25 PM	97	2/26/26 7:40 AM	275
73rd Street	2/26/26 12:20 PM	144		
Bonita Drive	2/26/26 12:10 PM	41		
BBE Outfall	3/5/2026 12:15 PM	3873		
75th Street End	3/5/2026 12:10 PM	537		
Kayak Launch	3/5/2026 12:00 PM	134	3/5/2026 2:15 PM	384
73rd Street	3/5/2026 11:55 AM	226		
Bonita Drive	3/5/2026 11:40 AM	63		