

OFFICE OF THE CITY MANAGER

NO. LTC# **077-2018**

## LETTER TO COMMISSION

TO: Mayor Dan Gelber and Members of the City Commission

FROM: Jimmy L. Morales, City Manager

DATE: February 16, 2018

SUBJECT: **Miami Beach Water Quality Sampling Program**

I am excited to share that the city has completed its first year of expanded water quality sampling and will be retaining a consultant to analyze the data, to improve our understanding of our local water quality. This report will be finalized within the next two months.

### **Background**

Clean waterways are critical to our local ecosystem, our residents' quality of life, and our economy. Therefore, the city implements a multi-faceted strategy to keep pollution from entering our waterways that meets and, where possible, exceeds regulatory requirements. The city's strategy is founded on the requirements of the National Pollution Discharge Elimination System (NPDES) permit program, which was created in 1972 by the Clean Water Act.

The NPDES permit program addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Miami Beach is one of more than 30 co-permittees with Miami-Dade County for NPDES Permit No. FLS000003, covering a combined total of more than 8,000 outfalls throughout Miami-Dade County. The city's 367 outfalls constitute only 3.8% of the total outfalls discharge into Biscayne Bay. As part of the NPDES permit requirements, the Miami-Dade County permit holders are required to regularly monitor the water quality in Biscayne Bay and its tributaries.

Miami-Dade County is responsible for collecting and analyzing samples across an established network of stations that have been monitored for over 30 years. Each co-permittee reviews the results of this sampling effort annually and uses this information to improve the efficacy of their stormwater management program. Per the results of the most recent report submitted in December 2016, the Southern North Bay region which receives the stormwater from Miami Beach complied for all parameters.

The health of Biscayne Bay is a regional concern. Contributing factors such as underground septic tanks, nutrient loading from agriculture, and inputs from heavy industry, are examples of inputs that cause other areas of the bay and contributing waterways to have higher nutrient loads and have lower percentages of dissolved oxygen. Through the development of the Greater Miami & the Beach Resiliency Strategy, recommendations for improving regional water quality will be developed.

### **Miami Beach Water Quality Sampling Program**

In 2016, the city launched its own water quality sampling program to expand upon the county's existing sampling network. The program added more than sixty stations to cover areas of Biscayne Bay closer to our shoreline and within our waterways for which data has historically not been collected. The data from this program will generate a more robust snapshot of local water quality and allow city staff to make better informed stormwater management decisions. This effort is unique to Miami-Dade County in that it goes above and beyond the NPDES permit requirements and was voluntarily initiated by the city.

It is important to note that the first year of data will serve as a baseline year, providing an initial picture of the health of our waterways through which we can begin to understand natural patterns of fluctuation in local water quality, such as tidal or seasonal variations. The baseline year will serve as a control to which we can compare the data collected in future years. The longer we collect data, the larger our sample size and the more statistical confidence we will be able to have in the analysis of the results. Therefore, each year we will have a better understanding of the health of our waterways than the previous year.

To ensure the integrity of the analysis and to turn it around more quickly, staff will be retaining an outside water quality expert to review the data, draw initial conclusions about the health of our waterways, and identify observable trends that will be monitored in subsequent years. The report is anticipated to be completed this spring. The results of the water quality sampling data analysis, coupled with the third-party scientific review conducted last year of our stormwater management program, will be used to strategically improve the city's stormwater management efforts in a way that will result in the greatest enhancement to waterway health.

Please do not hesitate to contact Elizabeth Wheaton, Environment and Sustainability Director, at 305-673-7010 if you have any questions.

SMT/ESW/MKW