

MIAMI BEACH

City of Miami Beach, 1700 Convention Center Drive, Miami Beach, Florida 33139, www.miamibeachfl.gov

COMMITTEE MEMORANDUM

TO: Sustainability and Resiliency Committee

FROM: Jimmy L. Morales, City Manager

DATE: May 20, 2019

SUBJECT: **DISCUSSION ON CITY OF MIAMI BEACH STORMWATER, SANITARY SEWER, AND WATER INFRASTRUCTURE BEST MANAGEMENT PRACTICES**

At the City Commission meeting on May 11, 2016, the Mayor and City Commission referred a discussion to the Sustainability and Resiliency Committee (SRC) regarding stormwater Best Management Practices. This item was sponsored by Commissioner Steinberg. On July 15, 2016, the SRC requested regular updates on the city's stormwater management activities.

BACKGROUND

The city operates a Municipal Separate Storm Sewer System (MS4), meaning the stormwater is separate from the sanitary sewer system. The Miami Beach MS4 is comprised of over 90 miles of pipes that carry rainwater collected from inlets on city streets and discharges it via more than 300 outfalls into our waterways and Biscayne Bay. Stormwater systems are a tool used by cities around the world for managing the runoff from rainfall. The city's stormwater system is designed to reduce the likelihood of flooding and keep streets dry. However, stormwater systems are also point sources of pollutants that carry contaminants picked up by rainwater.

The National Pollution Discharge Elimination System (NPDES) permit program addresses water pollution by regulating point sources that discharge pollutants to the waters of the U.S. The city is one of more than 30 co-permittees with Miami-Dade County for NPDES Permit No. FLS000003, the latest version of which was issued in June 2018. The Miami-Dade County NPDES permit covers a combined total of more than 8,000 outfalls throughout Miami-Dade County that discharge into Biscayne Bay, of which the city's outfalls constitute 3.8%.

UPDATE

The NPDES permit requires all permit holders to develop a stormwater management program that reduces potential pollution through a combination of education and outreach, good housekeeping, as well as the use of cutting-edge technology and industry-vetted operational practices. The city's stormwater management program focuses heavily on preventing pollution at its source: people. It is easier and less expensive for each person to do their part by picking up after their pets, tossing trash into designated bins, and properly applying landscape maintenance chemicals than to capture and remove pollutants in larger concentrations from within the stormwater system. Nevertheless, the city plays an important role in protecting water quality and has a well-rounded strategy to remove pollutants outside and inside the stormwater system before they reach Biscayne Bay.

On Thursday, April 25, interdepartmental staff met with Miami-Dade County Division of Environmental Resources Management (DERM) leadership to discuss water quality and talk

through the city's plans to improve upon our current efforts. The city began by highlighting the progress we have made over the last five years to improve water quality, including:

- In science, such as the voluntary launch of a municipal water quality sampling program with over 60 stations;
- In design, such as the modification of pumped outfall designs to include dissipator boxes that reduce discharge velocities from those approved in the city's first new generation pump stations;
- In operations, such as increasing stormwater system maintenance from once every three years to once every year;
- In policy, such as the citywide bans on polystyrene and plastic straws; and,
- In compliance, such as the creation of the city's environmental inspection programs to reduce sanitary sewer overflows and construction run-off.

During the meeting, DERM and city staff identified over 20 action items to take our stormwater management program to the next level. These actions include:

- Better educating residents on how the stormwater system works and providing guidelines for protecting water quality at home;
- Meeting with utilities that operate within our city to outline on-going challenges from emergency and maintenance dewatering operations to our stormwater system;
- Coordinating more regularly with DERM on our water quality sampling program to ensure consistent expectations and interpretation of results;
- Training public and private contractors on stormwater and environmental permitting compliance; and,
- Developing and implementing a plan to address scouring at select outfalls with recurring turbidity concerns.

We will continue to modify our program based on the best-available science, technology and strategies available for stormwater management.

CONCLUSION

The following is presented to the members of the Sustainability and Resiliency Committee as an update.

SMT/ESW/MKW