

OFFICE OF THE CITY MANAGER

NO. LTC# 045-2022

LETTER TO COMMISSION

TO: Honorable Mayor Dan Gelber and Members of the City Commission

FROM: Alina T. Hudak, City Manager 

DATE: February 2, 2022

SUBJECT: Park View Island Water Quality and Kayak Launch Update

The purpose of this memorandum is to provide an update on the water quality issues surrounding the Park View Island Kayak Launch site, and the potential next steps to address public health concerns while balancing the resident needs for access to the water via a kayak launch. My staff and I remain concerned along with the residents. The item has been discussed routinely at the Land Use and Sustainability Committee with quarterly Letter to Commission updates requested by the Committee.

Background

On March 4, 2020 Jaffer Wells Drilling, a sub-contractor for Hy-Power, struck a 42-inch sanitary sewer main near the intersection of 17 Street and Lincoln Road. This event caused increased pressure throughout the sanitary system and on March 5, 2020 caused a sewer force main break at the parking lot at 72 Street and Collins Avenue. Following the break, sewage recovery and cleaning efforts began immediately and continued for approximately one week after the spill. Water quality testing began on March 6, 2020 to identify impacts to the surrounding surface waters.

Typically, following a sanitary sewer break, surrounding surface waters will continue to have high bacteria counts for a couple of days following the incident. However, high bacteria counts continued many days following the sewage break repair and further analysis of historical data indicate that this waterway has chronically elevated bacteria levels beyond those caused by the sewer break.

Signage was posted at the kayak launch, notices were issued via the City's Neighborhood Affairs Division team, and information was posted on the City's website. The Public Works Operations Division, along with the Environment and Sustainability Department identified possible sources of cross-contamination in the area along with site specific conditions that potentially could negatively impact the area. The following were identified as potential sources of bacteria:

- Siphon (underwater sewer pipe) between Parkview Island and 72 Street
- Abandoned force main from North Bay Village at 72 street
- Abandoned overflow from Sewer Pump Station No. 23 located at 72 Street and Abbot Avenue
- Human waste from homeless community
- Animal waste
- Slow movement of water along the canal, possibly limiting "flushing" effect

The team has been working to test multiple theories related to these potential sources. This process is labor intensive and slow. Efforts to isolate potential sewer leaks have included multiple dye tests to isolate potential sewer leaks, 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. The investigations performed to date have not identified any deficiencies within the City's public infrastructure.

In October and November 2020, the City hired Source Molecular to complete source tracking analysis to identify fecal gene biomarker for humans and/or canines at four locations within the canal. The results indicated that fecal coliform from humans was not detected or detected, but in quantities below the limit of quantification. Fecal coliform for canines had high concentrations which led the City to launch a multi-tiered outreach campaign began to educate the public and encourage people to pick-up after their animals. This campaign includes advertisement on bus shelters, water bills, digital ads, and direct mailing. Educational signs have been installed in the local dog parks, parks, and along the right-of-way and reusable doggie bag dispensers and flyers were distributed to residents walking their dogs in the area as well as to local veterinarians and dog groomers.

In November 2020, the City retained ESciences, a third-party consultant specializing in environmental and ecological investigations, to conduct a thorough analysis of the data and investigations to date and provide a road map forward in the illicit discharge detection and elimination. Concurrently, smoke testing and CCTV inspections have also been performed to determine potential illegal cross connections between private property sewer lines and the City's stormwater system.

Between June and August 2021, additional DNA source sampling was conducted to identify fecal gene biomarker for humans and/or canines at four locations within the canal, but added a new fecal gene biomarker for birds. The results indicated that fecal coliform from humans was not detected or detected, but in quantities below the limit of quantification. Fecal coliform for canines continued to be detected at high concentrations, and the new biomarker for birds was also detected at high concentrations.

Interagency Collaboration

In July 2021, staff met with the Florida Department of Health (FDOH) and Miami-Dade County Division of Environmental Resources Management (DERM) to review the data. The recommendation from the meeting was to increase education and outreach related to residents cleaning-up after their dogs. To date, the Code Compliance Department has conducted 81 targeted inspections in this area, focusing specifically on dog issues. In addition, another communication effort was made to inform residents in the area of the importance of picking-up after their pets.

The City also had conversations with municipalities in Monroe and Broward Counties to explore other potential solutions for reducing the high bacteria which may be further replicating in the low-flow, high nutrient environment of the canal. Potential options include aeration and bubblers to increase dissolved oxygen and potential help increase water movement. These options will require environmental permits and conversation with the regulatory entities are on-going.

To date the City has spent over \$70,000 on investigations such as smoke testing, water quality sampling, contracting a third party to perform an unbiased investigation, and in performing additional cleaning and maintenance in the stormwater system.

Park View Island Water Quality Improvement Planning

I have directed staff to continue to explore all options to address the water quality issue at Park View, and they are working closely with water quality experts at FDOH and DERM. Although the efforts are currently unfunded and require regulatory coordination with DERM, Florida Department of Environmental Protection (FDEP), and the United States Army Corps of Engineers (USACE), there are numerous possibilities to be explored separately or conjointly.

Known options at this time include:

- Dredge the potentially bacteria-laden sediment to remove contaminants and increase the flowing and flushing of the tidal body of water;
- Stormwater improvements in the area including promoting green space to reduce direct run-off;
- Work with Miami-Dade County to evaluate private outfalls discharging from private property;
- Develop an aeration project to increase dissolved oxygen and promote water flow within the canal; and
- Relocate the kayak launch from Parkview Island Park to an alternative location for North Beach residents.

The interdisciplinary staff team will continue to move forward evaluating options, providing quarterly updates, and will provide a recommendation with a fiscal impact within the upcoming budget process. Staff will also continue to engage the community through neighborhood associations and methods of communication. For questions and comments regarding this memorandum, please contact Amy Knowles, Chief Resilience Officer/Interim Environment and Sustainability Director at amyknowles@miamibeachfl.gov.

ATH/LS/AK/LP