CITY OF FORT LAUDERDALE
City Commission Agenda Memo **#20-0844**
CONFERENCE MEETING

TO: Honorable Mayor & Members of the Fort Lauderdale City Commission

FROM: Chris Lagerbloom, ICMA-CM, City Manager

DATE: October 20, 2020

TITLE: Overview of Amended Consent Order and Reports on Water Quality Assessment in Tarpon River and George English Lake - (**Commission Districts 1 and 4**)

On June 12, 2020, the City received an Amended Consent Order (Amended Order) from the Florida Department of Environmental Protection (FDEP) for the release of untreated wastewater from the City Collection System into surface waters and/or ground waters occurring between December 10, 2019 and February 14, 2020. The Amended Order established two (2) primary requirements as follows:

1. Within six (6) months, install temporary emergency generators within the George T. Lohmeyer Wastewater Treatment Plant (GTL) with sufficient capacity to ensure un-interrupted operation of the injection well pumping system and, within 24 months, replace the temporary emergency generators with permanent generators.
2. Assess the potential impacts of the wastewater discharge in the Tarpon River and George English Lake, estimate the amount of solids released from the discharge events, determine if remaining solids are causing violations of water quality standards, take remedial actions if necessary, develop a surface water enhancement plan and submit reports to the FDEP for review and comments. Later, FDEP added the water quality assessment of the Himmarshee Canal.

In addition, the FDEP also mandated that the City pay a fine of $2,116,500 within 90 days or implement in-kind projects at a value of $3,167,250 in lieu of the fine.

Water Quality Assessment Findings

The City engaged E-Sciences, Inc. (E-Sciences) and Wood Environment & Infrastructure Solutions, Inc. (Wood) to assess the water quality impacts in the Tarpon River and George English Lake respectively. Their extensive environmental investigations were supplemented by a technical memo from Hazen and Sawyer P.C. (Hazen) that quantified the amount of solids released from the sewage discharge, how much degraded naturally (bio-degrade) and how much remained in the waterway. This

was one of the key requirements of FDEP to determine the residual environmental impacts in the waterways.

E-Sciences surveyed and core-sampled approximately 3,800 feet of Tarpon River bottom, both upstream and downstream of the discharge point. Based on their analyses, they concluded that the impact area was limited to approximately 400 feet starting from the discharge point.

Wood surveyed and core-sampled the perimeter of George English Lake and a couple of locations in the Middle River. Based on their analyses, they concluded that the impact area was limited to approximately 300 feet in the immediate vicinity of the discharge point.

Using the City's monthly operating reports (MOR), Hazen calculated the amount of solids released from the sewage based on the discharge volume and total suspended solids (TSS). They reported that the TSS initially discharged had two (2) components – volatile suspended solids (VSS), or bio-degradable, and fixed suspended solids (FSS). Since the water quality returned within the normal parameters (normal oxygen level and low enterococci level), Hazen further concluded the VSS is either not present in the waterbodies anymore and/or got washed away in Tarpon River, a tidal water body. This left only a small volume of FSS that is spread like a thin layer of dust, approximately one (1) inch or less thick.

Remediation

For actual remediation work to begin, it would be necessary to wait until the assessment reports prepared by E-Sciences, Wood and Hazen have been reviewed and accepted by FDEP.

Remediation at George English Lake is relatively simple. It is a stagnant water body and contiguous to large open space that could be used as a staging area for dredging. To date, permits have been received and City staff is negotiating with a contractor for fair pricing.

On the other hand, remediation in Tarpon River is complex. One of the biggest challenges is to find the most effective way to remove this thin layer of FSS without having the unintended consequence of stirring up other pollutants, including heavy metals that could be present for years prior to the sewer discharge. This concern is shared by both the FDEP and Broward County Environmental Department. The other challenging factor is that Tarpon River is surrounded by houses on both sides. As a result, City staff has been evaluating the most feasible removal method.

Assessment Reports by Consultants

The assessment reports for Tarpon River and George English Lake were substantially complete approximately two months ago. However, they were not finalized and

released because the City staff was negotiating several expensive provisions in the Amended Consent Order. Now that the Amended Consent Order has been signed by the City, the consultants will finalize their respective reports and submit to FDEP as required. Simultaneously, they will be posted on the City's web site.

E-Sciences has begun work on the Himmarshee Canal investigation. This work will be performed along the same lines as Tarpon River.

Strategic Connections

This item is a *2020 Top Commission Priority*, advancing the Waterway Quality and Infrastructure initiatives.

This item supports the *Press Play Fort Lauderdale 2024* Strategic Plan, specifically advancing:

- The Public Places Focus Area
- Goal 3: Build a healthy and engaging community
- Objective: Improve water quality for our natural environment

This item advances the *Fast Forward Fort Lauderdale 2035* Vision Plan*:* We Are Ready

Attachments

Exhibit 1 – Tarpon River Study and Impact Areas
Exhibit 2 – George English Study Area
Exhibit 3 – George English Impact Area

Prepared by: Raj Verma, Director, Public Works Director

Department Director: Raj Verma, Public Works