

June 10, 2022

Sarah O. DelNegri  
Flynn Engineering Services, P.A.  
241 Commercial Blvd  
Lauderdale-By-The-Sea, FL 33308

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER**  
**200 Third – DRC Case No. UDP-S21048**  
**200 NE 3 St, Ft. Lauderdale, FL 33301**

Dear Sarah O. DelNegri,

According to the information submitted, the project consists of developing vacant lots with 388 residential units and 2300 square feet (SF) of retail space. There are proposed water and sewer connections to City of Fort Lauderdale (City) utilities along N.E. 3<sup>rd</sup> Street. This project lies within the City's Pump Station (PS) A-7 basin and will increase the average day water demand by approximately 0.0724 million gallons per day (MGD) and the average day sewer demand by approximately 0.0549 MGD. While the existing water infrastructure has the capacity to support the project, please note, sewer improvements are needed.

If there are changes to the proposed development after issuance of this capacity availability letter, the Owner or Owner's authorized representative shall submit a revised request based on the updated plans. Failure to seek approval prior to changing the plans may result in revocation of permit and capacity allocation. The determination of capacity availability is based upon tools and data analysis as of the date of this letter. Availability of capacities, as calculated in the attached analysis, is not guaranteed and no existing system capacity shall be considered "committed" for this project until a permit has been issued and all fees have been paid. The City reserves the right to re-evaluate the availability of capacities at the time of permit application. If sufficient capacities are not available, the City may deny the permit application or ask the Owner/Developer to submit an alternate design prior to approval. Information contained in this letter will expire one year from the date issued.

Should you have any questions or require any additional information, please contact me at (954) 828-5115.

Sincerely,



Gabriel Garcia, E.I.  
Project Manager II

Enclosures: Water and Wastewater Capacity Analysis

cc: Alan Dodd, P.E., Public Works Director  
Talal Abi-Karam, P.E., Assistant Public Works Director  
Omar Castellon, P.E., Assistant Public Works Director  
Daniel Rey, P.E., City Engineer  
File: Water and Sewer Capacity Letters

City of Fort Lauderdale  
Public Works Department  
Water and Wastewater Capacity Analysis

**200 Third – DRC Case No. UDP-S21048  
200 NE 3 St, Ft. Lauderdale, FL 33301**

**PROJECT AND DESCRIPTION**

The project consists of developing vacant lots with 388 residential units and 2300 square feet (SF) of retail space

**DESCRIPTION OF EXISTING UTILITIES**

**Water:** The site is currently served by a 6-inch water main along N.E. 3<sup>rd</sup> street, north of the project site. See Figure 1.

**Wastewater:** The site is currently served by a 10-inch gravity sewer main along N.E. 3<sup>rd</sup> street, north of the project site. See Figure 2.

**Pumping Station:** The site is served by PS A-7 which is located along S.E. 2<sup>nd</sup> Street.

**SUMMARY OF ANALYSIS AND REQUIRED ACTION**

While the existing water infrastructure has the capacity to support the project, please note, approximately 2,300 linear feet of sewer improvements are needed as detailed below:

- The existing 10-inch sewer pipe SSGM-733 shall be increased to 12-inch
- The existing 10-inch sewer pipe SSGM-734 shall be increased to 15-inch
- The existing 10-inch sewer pipe SSGM-735 shall be increased to 15-inch
- The existing 10-inch sewer pipe SSGM-736 shall be increased to 18-inch

Please see Figure 3 for a map illustrating the areas of improvements

Figure 1 – City Water Atlas

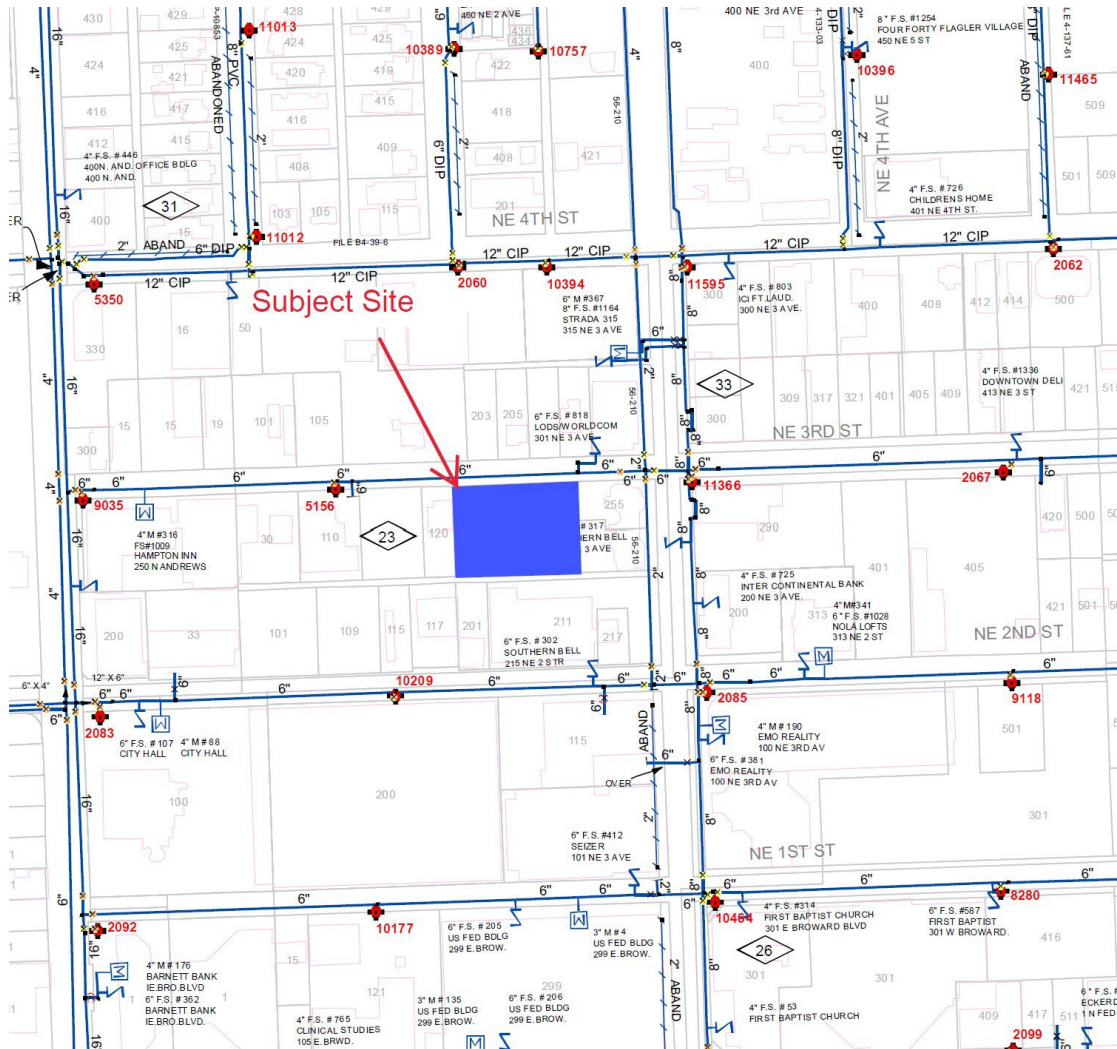
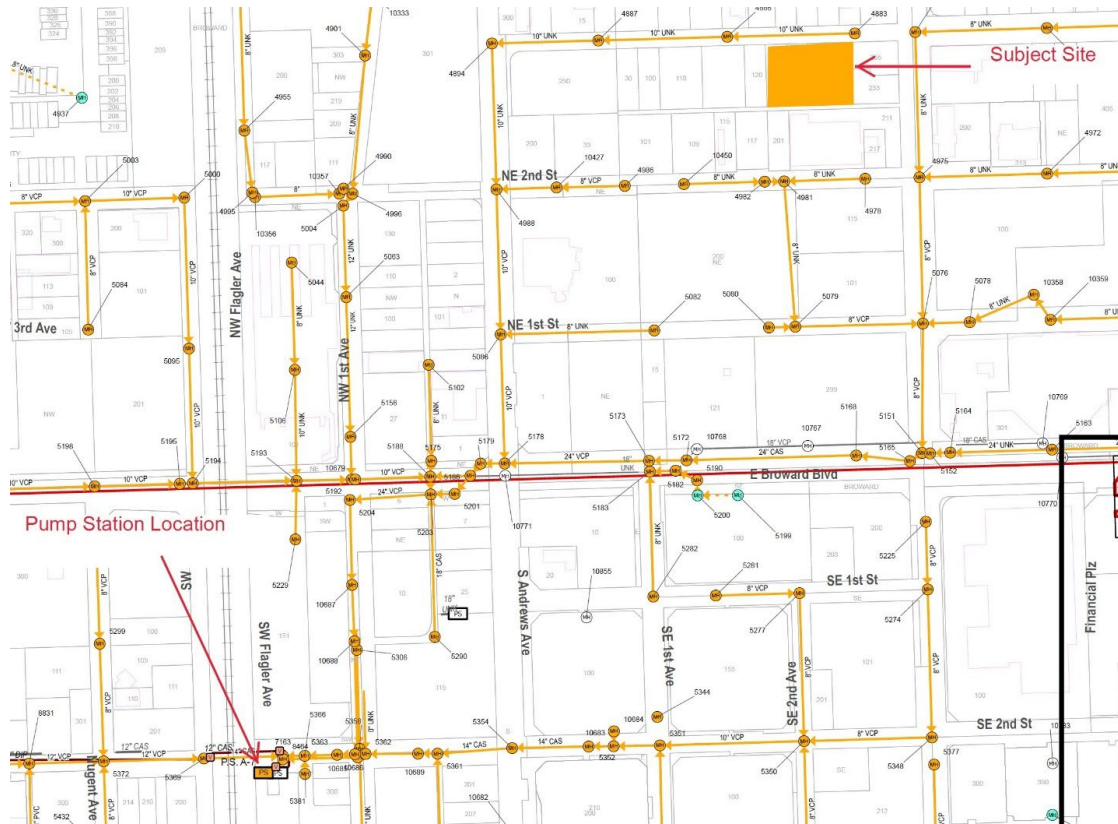


Figure 2 – City Sewer Atlas





## **WATER CAPACITY ANALYSIS**

**Requested Demand:** Based on the applicant's site plan and building use information, the estimated average day potable water demand is approximately 72370 gallons per day (GPD), which equates to 0.0724 MGD. Average day water use demands are calculated by reducing the calculated max day water use demands by a factor of 1.3 as determined in the City's Comprehensive Utility Strategic Master Plan. The max day water use demands are calculated using the City's Guidelines for the Calculations of Sanitary Sewer Connection Fees and are based on City Ordinance No. C-19-29.

**Evaluation of impact on existing distribution pipe:** According to the site plan, the applicant is proposing to utilize the 6-inch water main along N.E. 3<sup>rd</sup> Street. The InfoWater hydraulic model was analyzed to determine the impact of this project on the existing 6-inch water main.

**Evaluation of impact of Permitted Water Plant Capacity:** The Fiveash and the Peele Dixie Water Treatment Plants are designed to treat 70 MGD and 12 MGD of raw water respectively (82 MGD total). The total permitted Biscayne aquifer water withdrawals for these plants is limited to 52.55 MGD per the South Florida Water Management District (SFWMD) permit number 06-00123-W.

The current twelve-month rolling average production at the two plants is 38.68 MGD. The previously committed demand from development projects in the permitting or the construction stage is 4.78 MGD. Combining these figures with the demand from the proposed project of 0.0724 MGD, the required production would be 43.53 MGD. This is less than the allowable withdrawal limit of 52.55 MGD. Therefore, the water plants have sufficient capacity to serve this project. See Figure 4 below.

**Recommended Water Infrastructure Improvements:** No improvements required.

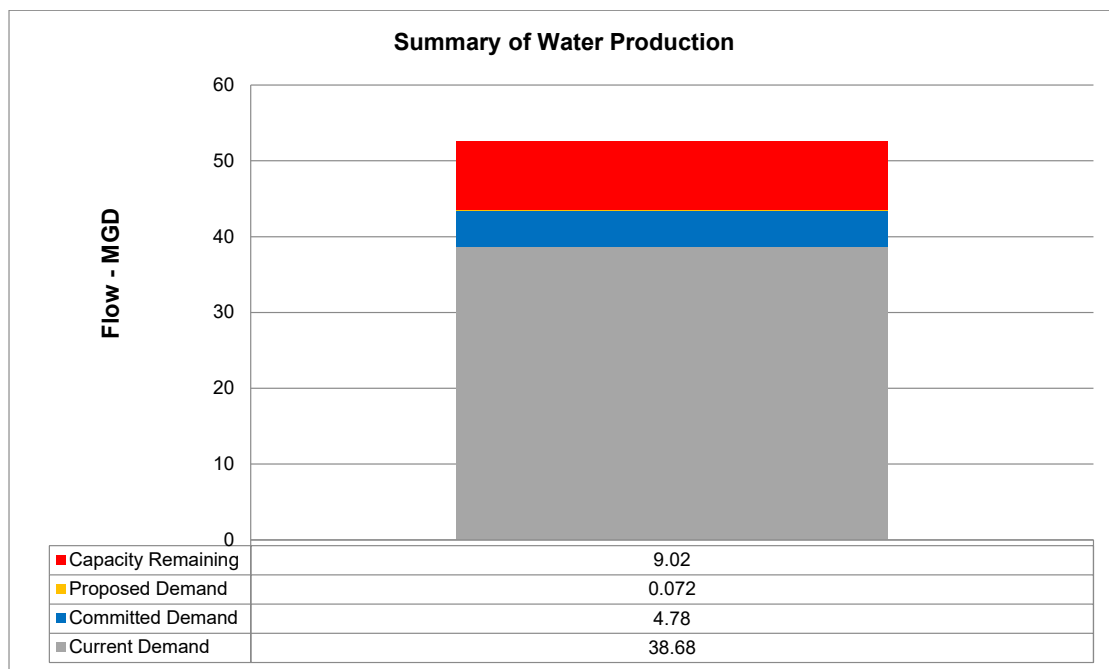


Figure 4

## **WASTEWATER CAPACITY ANALYSIS**

**Requested Demand:** Based on the applicant's site plan and building use information, the estimated average day sewer use demand is approximately 54881 GPD, which equates to 0.0549 MGD. Average day sewer use demands are calculated using the City's Guidelines for the Calculations of Sanitary Sewer Connection Fees and are based on City Ordinance No. C-19-29.

**Evaluation of impact on existing collection pipe:** According to the site plan, the applicant is proposing to utilize the 10-inch gravity sewer main to the north of the project site along N.E. 3<sup>rd</sup> Street. Manual of Practice (MOP) 60, published by American Society of Civil Engineers (ASCE) for the gravity sewer design and used by the City staff, recommends that pipe diameters 15-inch or less be designed to flow half full during peak flows. The City uses a peak hourly flow factor of 3.0. Accounting for existing flows and based on the tools and information available to the City staff, it has been calculated that the pipes downstream of the proposed development will flow less than the ASCE-recommended 70% during peak flows. Therefore, the pipes downstream of the developments are adequate to serve the project.

**Evaluation of impact on pumping station:** PS A-7 has a duty point of 2000 gallons per minute (GPM) and has a Nominal Average Pumping Operating Time (NAPOT) of approximately 14.96 hours per day. Based on projected sewage flows, the pumping run times would increase approximately 27 minutes per day. Additionally, there are other committed flows from proposed developments within the PS A-7 basin resulting in 684.54 minutes of additional runtime. PS A-7 will have a NAPOT of 26.83 hours once the proposed developments are complete. While the PS A-7 pump is running above the City's NAPOT standard of 10 hours, it shall be noted that this pump station is equipped with a variable frequency drive pump which allows for higher run times. See Figure 5 below.

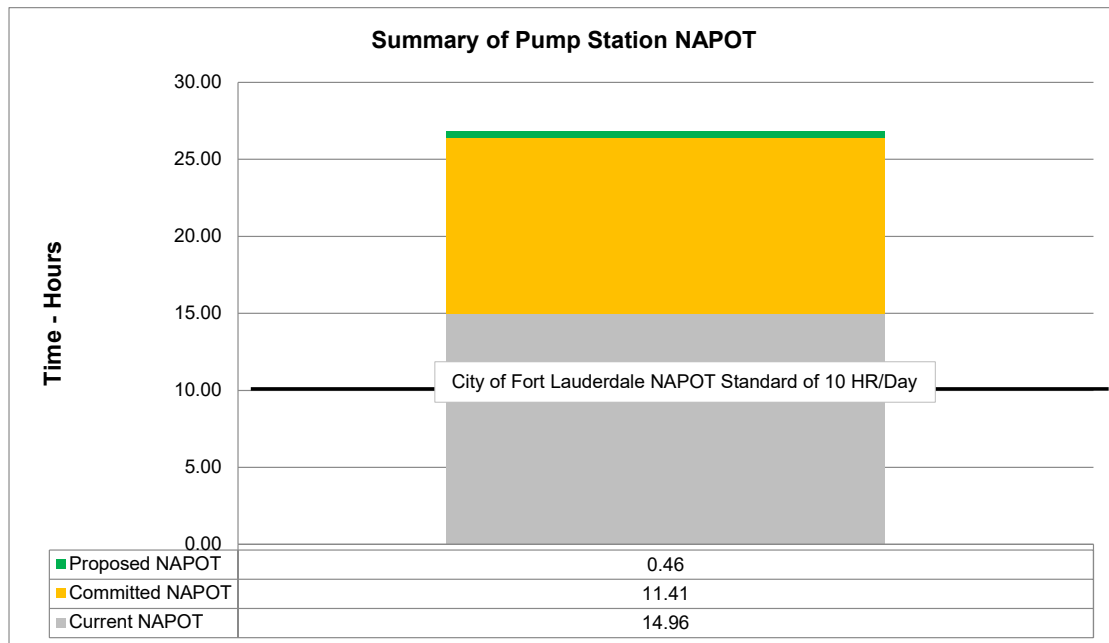


Figure 5



**Evaluation of impact of Permitted Wastewater Plant Capacity:** The City of Fort Lauderdale owns and operates the George T. Lohmeyer Regional Wastewater Treatment Plant (GTL), which provides wastewater treatment for the City of Fort Lauderdale. The Broward County's Environmental Protection and Growth Management Department's (EPGMD) Environmental Licensing & Building Permitting Division's licensed capacity for GTL is 48 MGD-AADF (Million Gallons per Day – Annual Average Daily Flow). The annual average daily flow (AADF) to the plant is 41.88 MGD. Combining the committed flows for previously approved projects of 4.62 MGD plus the 0.0549 MGD net contribution from the project results in a total projected flow of 46.55 MGD. This is less than the permitted treatment plant capacity of 48 MGD. Therefore, the treatment plant has sufficient capacity to serve this project. See Figure 6 below.

**Recommended Wastewater Infrastructure Improvements:**

In order to have sufficient capacity to accommodate the proposed development, approximately 2,300 linear feet of sewer upgrades are needed as detailed below:

- The existing 10-inch sewer pipe SSGM-733 shall be increased to 12-inch
- The existing 10-inch sewer pipe SSGM-734 shall be increased to 15-inch
- The existing 10-inch sewer pipe SSGM-735 shall be increased to 15-inch
- The existing 10-inch sewer pipe SSGM-736 shall be increased to 18-inch

Please see Figure 3 (above) for a map illustrating the areas of improvements

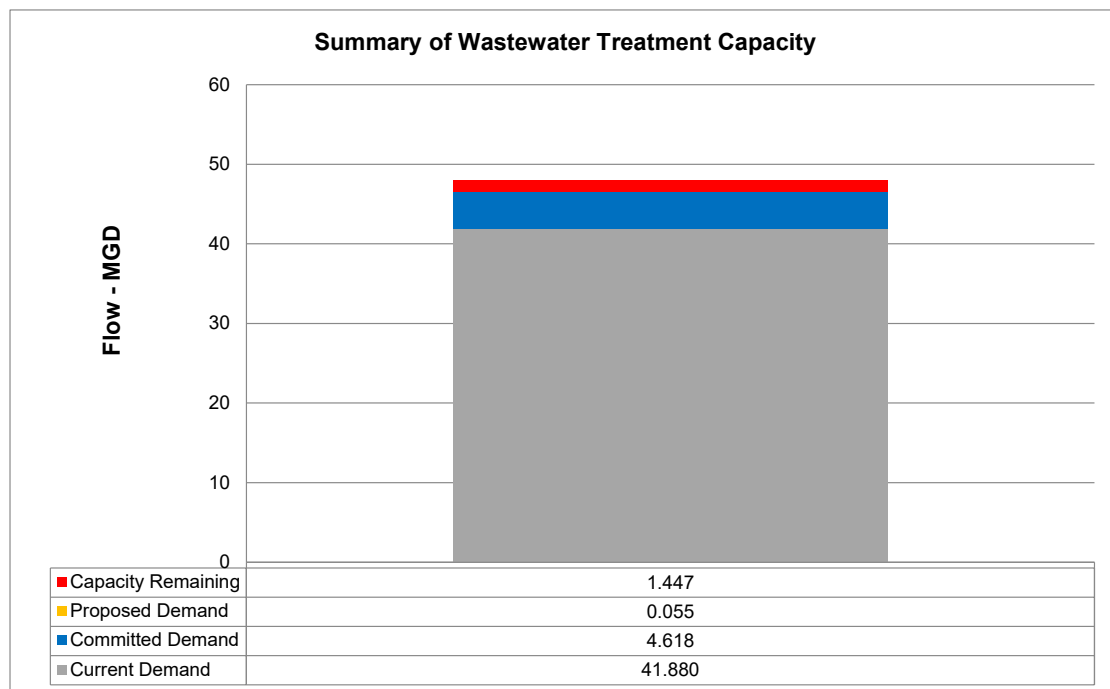


Figure 6