



PROJECT ADDRESS: 199 NW 5th Avenue

Date request was received:2/7/2022

DRC CASE#: UDP-S22002

Project Name: 199 NW 5th Avenue

IF NO DRC CASE NUMBER PROVIDED, WATER & SEWER AVAILABILITY LETTER TO BE PROVIDED UPON PAYMENT OF ENCLOSED A/R INVOICE.

\*\*\*\*\*IMPORTANT INFORMATION\*\*\*\*\*

The following analysis is only VALID FOR A PERIOD OF ONE YEAR FROM THE DATE OF ISSUANCE. After which point, a reanalysis must be conducted to ensure adequate availability for projects.

- Water and Sanitary Sewer Capacity Allocation Letter (Small Project) .....\$960
- Modifications to small project that require capacity re-analysis.....\$960
- Water and Sanitary Sewer Capacity Allocation Letter (Large Project) .....\$2,400
- Modifications to large project that require capacity re-analysis.....\$2,400

Igor Vassiliev, P.E. | Project Manager II  
City of Fort Lauderdale | Public Works  
P: (954) 828-5862 | E: [lvassiliev@fortlauderdale.gov](mailto:lvassiliev@fortlauderdale.gov)

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May 24, 2022

Sarah DelNegri  
Flynn Engineering  
241 Commercial Boulevard  
Lauderdale-By-The-Sea, FL 33308

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER**  
**199 NW 5th Avenue – DRC Case No. UDP-S22002**  
**199 NW 5th Avenue, Fort Lauderdale, FL**

Dear Ms. DelNegri,

According to the information submitted, the project consists of a 34-story 400-unit residential tower with 4,798 SF of ground floor retail space. The existing properties are currently occupied by 10,666 SF of warehouse space and 4,880 SF of retail space. The proposed connections to City of Fort Lauderdale (City) water utilities are located along NW 2<sup>nd</sup> Street and to sewer utilities along NW 5<sup>th</sup> Avenue. This project lies within the City's Pump Station (PS) A-7 basin and will increase the average day water demand by approximately 0.0734 million gallons per day (MGD) and the average day sewer demand by approximately 0.0557 MGD. The existing water and sewer infrastructure have the capacity to support the proposed development and no 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) 828-5862.

Sincerely,

Igor Vassiliev, P.E.  
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., Chief Engineer  
Daniel Rey, P.E., Land Development Manager  
File: Water and Sewer Capacity Letters

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

**199 NW 5th Avenue – DRC Case No. UDP-S22002**  
**199 NW 5th Avenue, Fort Lauderdale, FL**

**PROJECT AND DESCRIPTION**

The project consists of a 34-story 400-unit residential tower with 4,798 SF of ground floor retail space.

**DESCRIPTION OF EXISTING UTILITIES**

**Water:** The site is currently served by a 12-inch water main along NW 2<sup>nd</sup> Street, north of the project site. See Figure 1.

**Wastewater:** The site is currently served by an 8-inch gravity sewer main to the east of the project site along NW 5<sup>th</sup> Avenue. See Figure 2.

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

**SUMMARY OF ANALYSIS AND REQUIRED ACTION**

The existing infrastructure has the capacity to support the proposed development. Therefore, no improvements are needed.

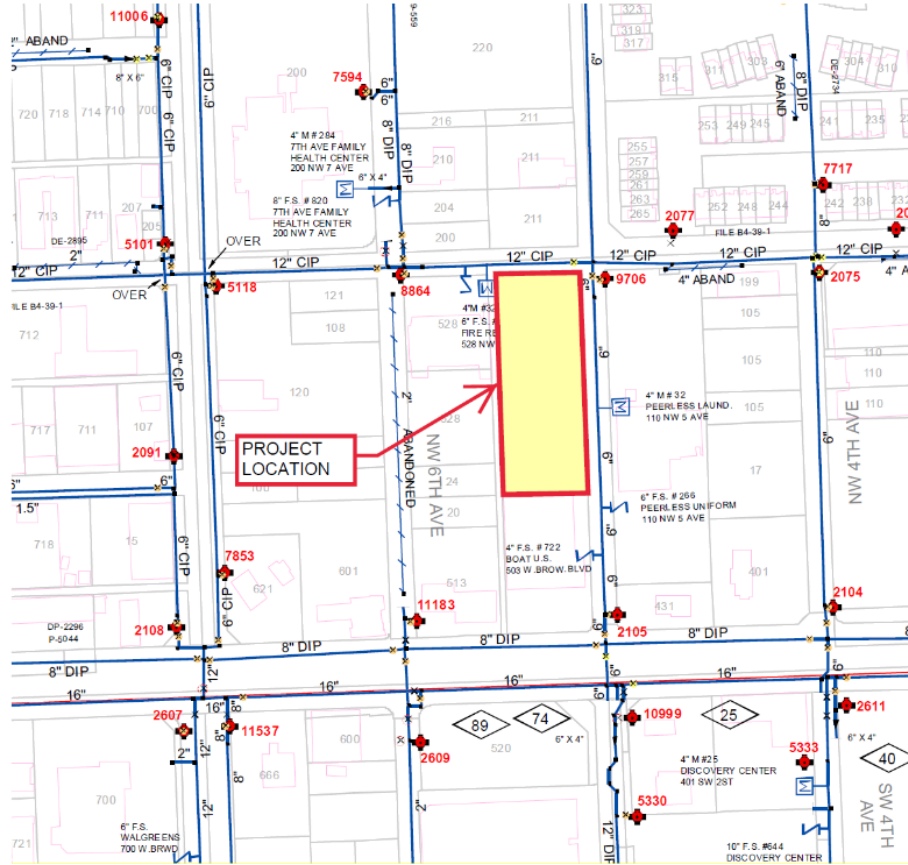
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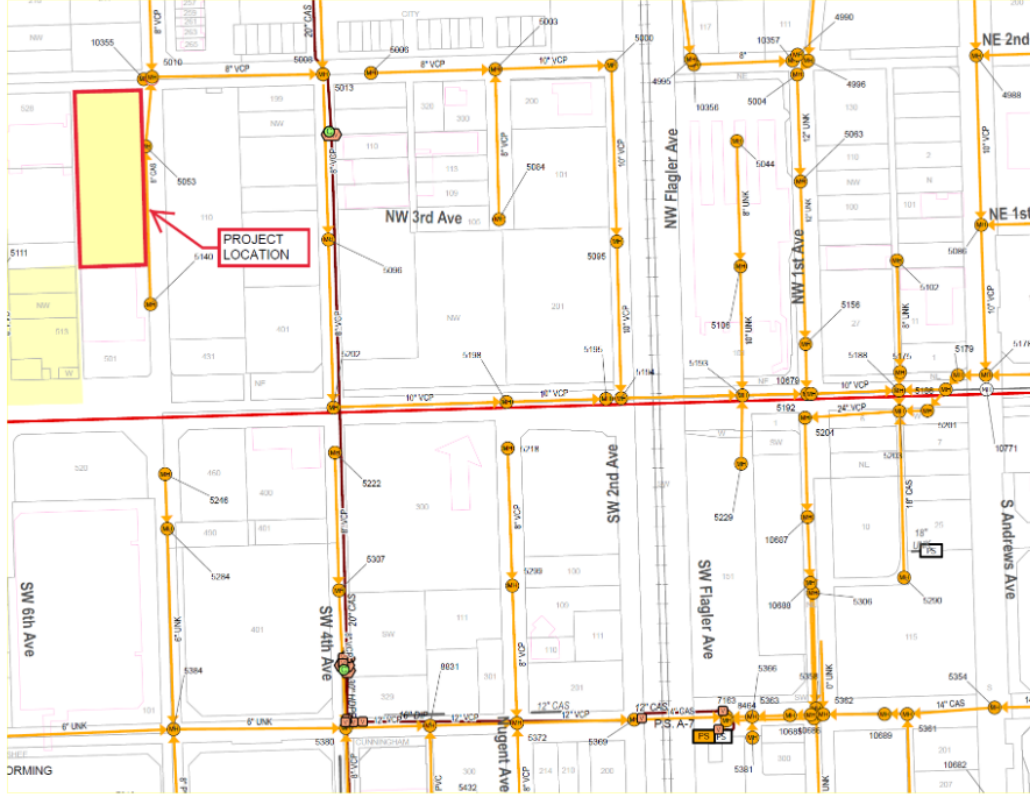
Figure 1 – City Water Atlas



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**Figure 2 – City Sewer Atlas**



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**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 73391 gallons per day (GPD), which equates to 0.0734 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 12-inch water main along NW 2<sup>nd</sup> Street. The InfoWater hydraulic model was analyzed to determine the impact of this project on the existing 12-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 38.71 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 0.0734 MGD, the required production would be 43.57 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 3 below.

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

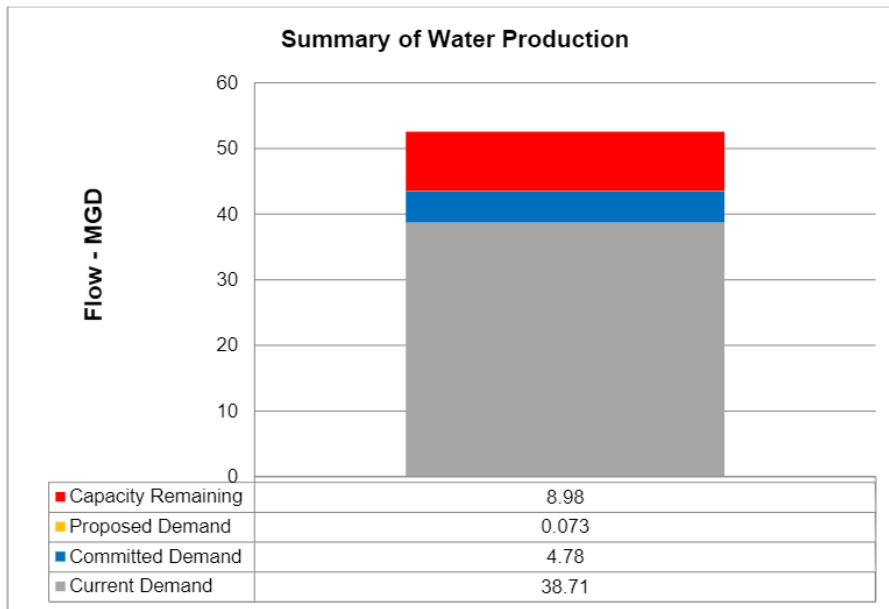


Figure 3

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**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 55655 GPD, which equates to 0.0557 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 8-inch gravity sewer main to the north of the project site along NW 5<sup>th</sup> Avenue. 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 16.80 hours per day. Based on projected sewage flows, the pumping run times would increase approximately 28 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 28.67 hours once the proposed developments are complete. See Figure 4 below. Notwithstanding the above, PS A-7 is equipped with a variable frequency drive (VFD) and can operate with a NAPOT higher than 10 hours. PS A-7 is equipped with three variable frequency drive (VFD) pumps; therefore, it is reasonable to expect the projected increase in runtimes will be smaller than those calculated on a basis of fixed speed pumps and the PS A-7 will have capacity to handle the proposed flow increase.

Currently PS A-7 is undergoing major upgrades that include the installation of larger pumps that will result in a substantial increase of PS A-7 capacity. The project is scheduled to be completed by September of 2022.

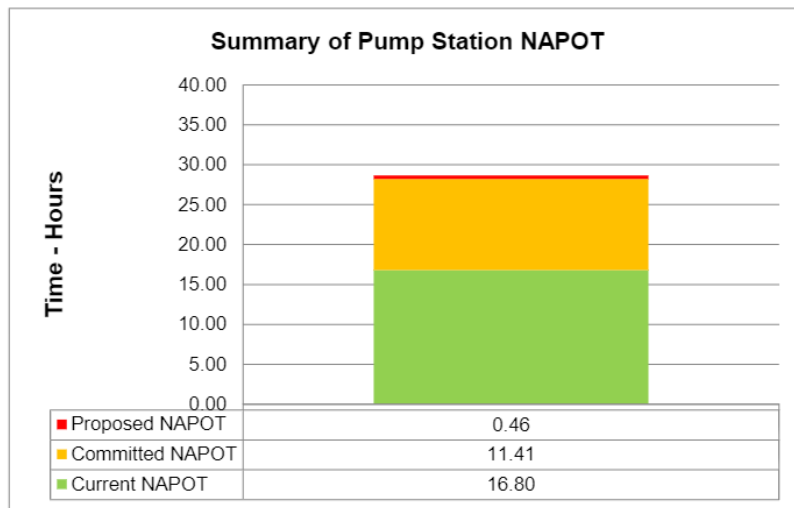


Figure 4

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**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 41.39 MGD. Combining the committed flows for previously approved projects of 4.62 MGD plus the 0.0557 MGD net contribution from the project results in a total projected flow of 46.07 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 5 below.

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

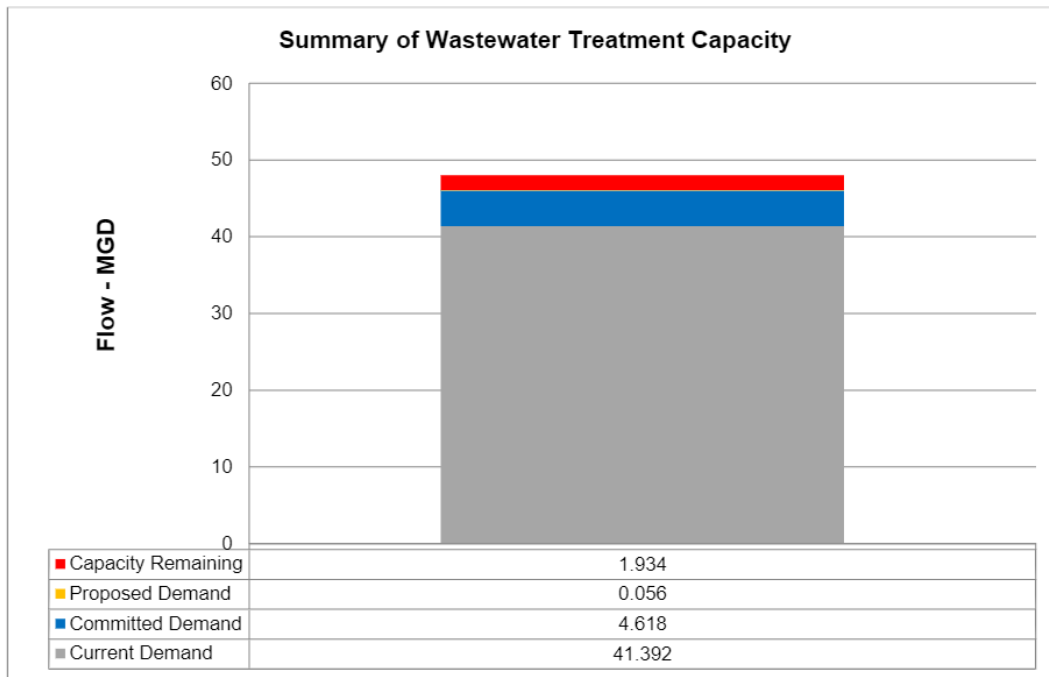


Figure 5

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