

**PROJECT ADDRESS: 901 North Federal Highway**

**Date request was received:12/13/2022**

**DRC CASE#: UDP-S21010**

**Project Name: RK Center Mixed Use**

**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

April 21, 2023

Shane Grabski  
Flynn Engineering Services  
241 Commercial Blvd.  
Lauderdale-By-The-Sea, FL 33308

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER  
RK Center Mixt Use – DRC Case No. UDP-S21010  
901 North Federal Highway, Fort Lauderdale, FL 33304**

Dear Shane Grabski,

According to the information submitted, the project consists of three parcels: Parcel I (PLN-SITE-19120001) consists of 819 multi-family residential units, approximately 72,000 square feet (SF) of retail and office space, and approximately 8,000 SF of restaurant space; Parcel II (PLN-SITE-19120002) consists of 214 multi-family residential units and 4,770 SF of restaurant space; Parcel III (PLN-SITE-19120003) consists of 135 multi-family residential units, approximately 15,000 SF of retail/art studio space, and approximately 2,300 SF of restaurant space. There are proposed water and sewer connections to City of Fort Lauderdale (City) utilities along North Flagler Avenue, NE 5<sup>th</sup> Avenue, NE 4<sup>th</sup> Avenue, and NE 9<sup>th</sup> Street. This project is located within the City's Pump Station (PS) A-24 basin and will increase the average day water demand by approximately 0.2392 million gallons per day (MGD) and the average day sewer demand by approximately 0.1646 MGD. The existing water infrastructure has the capacity to support the proposed development and no improvements are needed. The sewer infrastructure does not currently have the capacity to support the proposed development and improvements will be required to accommodate the flow increase from the proposed development.

*The following project is the City's major initiative within basin A-21:  
Project # 12605 – New Pumping Station Flagler Village A-24  
Estimated Construction Completion: Fiscal Year 2024*

The upcoming CIP project # 12605 will create a new Pump Station A-24, which will divide the sewer flows and will handle the increased demand in committed NAPOT to Pump Station A-21 as well as existing flows. Once the new pump station is constructed, the proposed development will be discharging to Pump Station A-24.

Please be advised that the proposed Flagler Village Pump Station A-24 is estimated to become operational sometime during Fiscal Year 2024 provided unforeseen circumstances are not encountered. Therefore, the timeline of all improvements must be coordinated well in advance with the City.

The improvements will also be required to the gravity sewer system. The gravity sewers on NE 6<sup>th</sup> Street and NE 5<sup>th</sup> Avenue will have to be upsized to handle the proposed flow increase.

Any Certificate of Occupancy will not be issued until the improvements are installed and the expanded wastewater system is fully functional.

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 development approval and all fees have been paid. The City reserves the right to re-evaluate the availability of capacities at the time of building 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,

A handwritten signature in blue ink, appearing to read 'Igor Vassiliev', written in a cursive style.

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., 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

**RK Center Mixt Use – DRC Case No. UDP-S21010  
901 North Federal Highway, Fort Lauderdale, FL 33304**

**PROJECT AND DESCRIPTION**

The project consists of three separate parcels: Parcel I (PLN-SITE-19120001) consists of 819 multi-family residential units, approximately 72,000 square feet (SF) of retail and office space, and approximately 8,000 SF of restaurant space; Parcel II (PLN-SITE-19120002) consists of 214 multi-family residential units and 4,770 SF of restaurant space; Parcel III (PLN-SITE-19120003) consists of 135 multi-family residential units, approximately 15,000 SF of retail/art studio space, and approximately 2,300 SF of restaurant space.

**DESCRIPTION OF EXISTING UTILITIES**

**Water:** Parcel I is served by an 8-inch and 12-inch water main to the west of the parcel along NE 5<sup>th</sup> Avenue and North Flagler Drive, respectively. Parcel II is served by an 8-inch water main to the west of the parcel along NE 5<sup>th</sup> Avenue and Parcel III is served by an 8-inch water main to the west of the parcel along NE 4<sup>th</sup> Avenue. See Figure 1.

**Wastewater:** Parcel I is served by a 10-inch gravity sewer main to the west of the project along NE 5<sup>th</sup> Avenue. Parcel II and Parcel III are served by 12-inch gravity sewer mains to the north of the parcels along NE 9<sup>th</sup> Street which convey flow to the 12-inch gravity sewer main along NE 5<sup>th</sup> Avenue. See Figure 2.

**Pumping Station:** The development is currently served by PS A-21, which is located near the NE 2<sup>nd</sup> Avenue and NE 6<sup>th</sup> Street intersection. Upon completion of a new PS A-24 the site will be served by PS A-24 which will be located near the NE 3<sup>rd</sup> Avenue and NE 6<sup>th</sup> Street intersection.

**SUMMARY OF ANALYSIS AND REQUIRED ACTION**

A review of the utility services impacted by the development indicates that improvements to the sanitary sewer mains would be necessary to adequately serve the development to the City's standards. Approximately 400 linear feet (LF) of 12-inch gravity sewer shall be upsized to a 15-inch pipe along NE 5<sup>th</sup> Avenue and approximately 600 LF of 15-inch gravity sewer shall be upsized to an 18-inch pipe along NE 6<sup>th</sup> Street. These improvements will allow the gravity mains to sufficiently handle the proposed and existing flows in the contributing area.

Additionally, PS A-21 does not have sufficient capacity to handle the proposed development. The proposed PS A-24 shall be constructed and on-line prior to the proposed development seeking a Certificate of Occupancy. See Figure 3 for a summary of recommended improvements.

The existing water infrastructure has sufficient capacity to serve the project.

Figure 1 – City Water Atlas

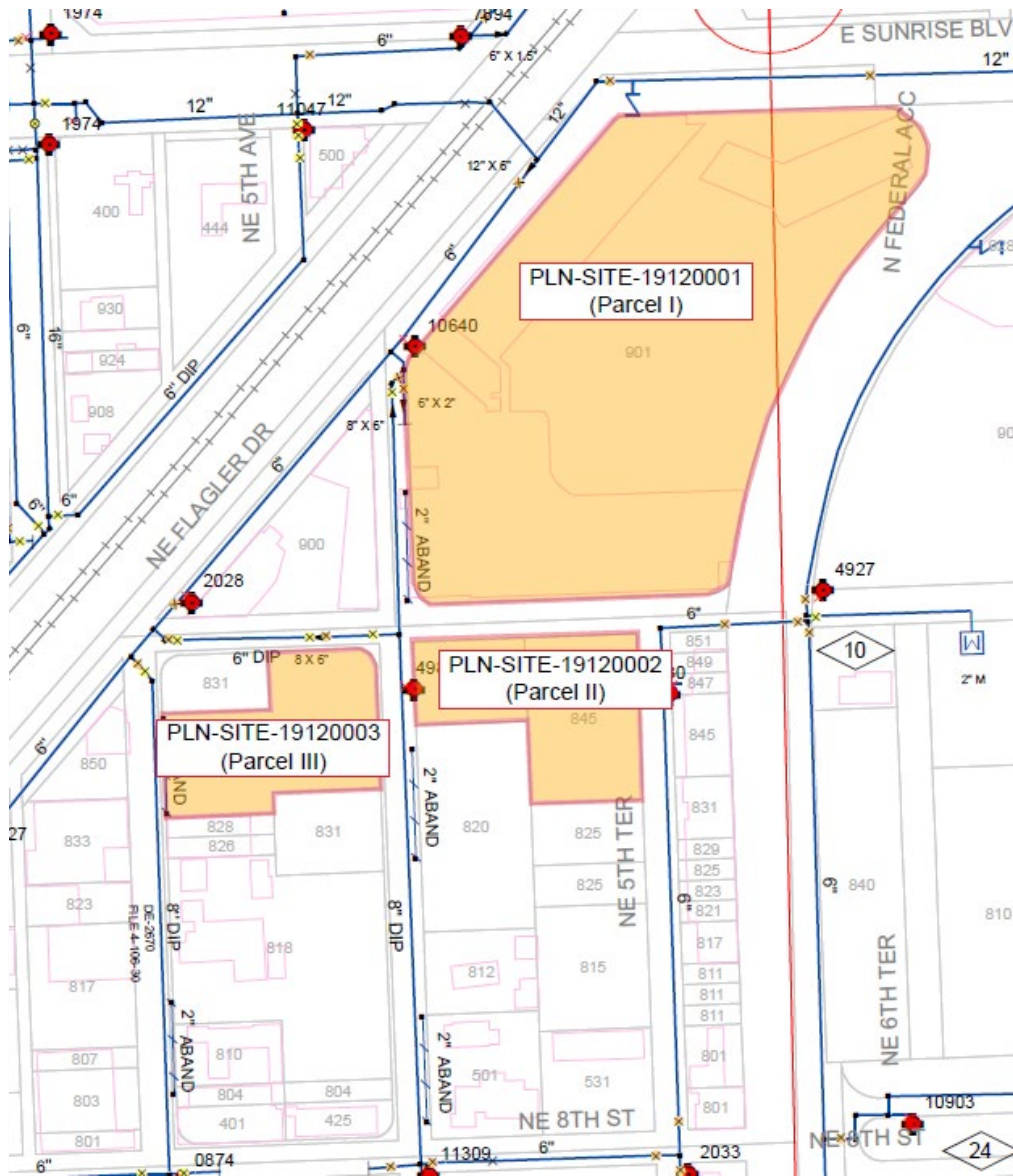


Figure 2 – City Sewer Atlas

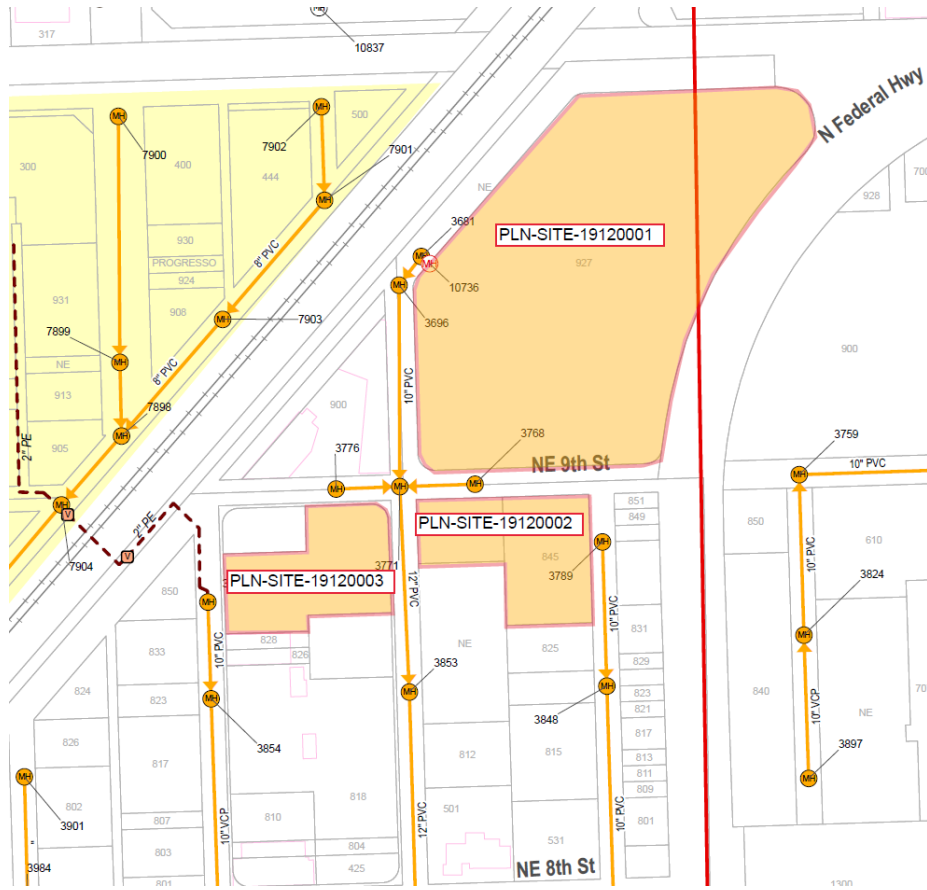
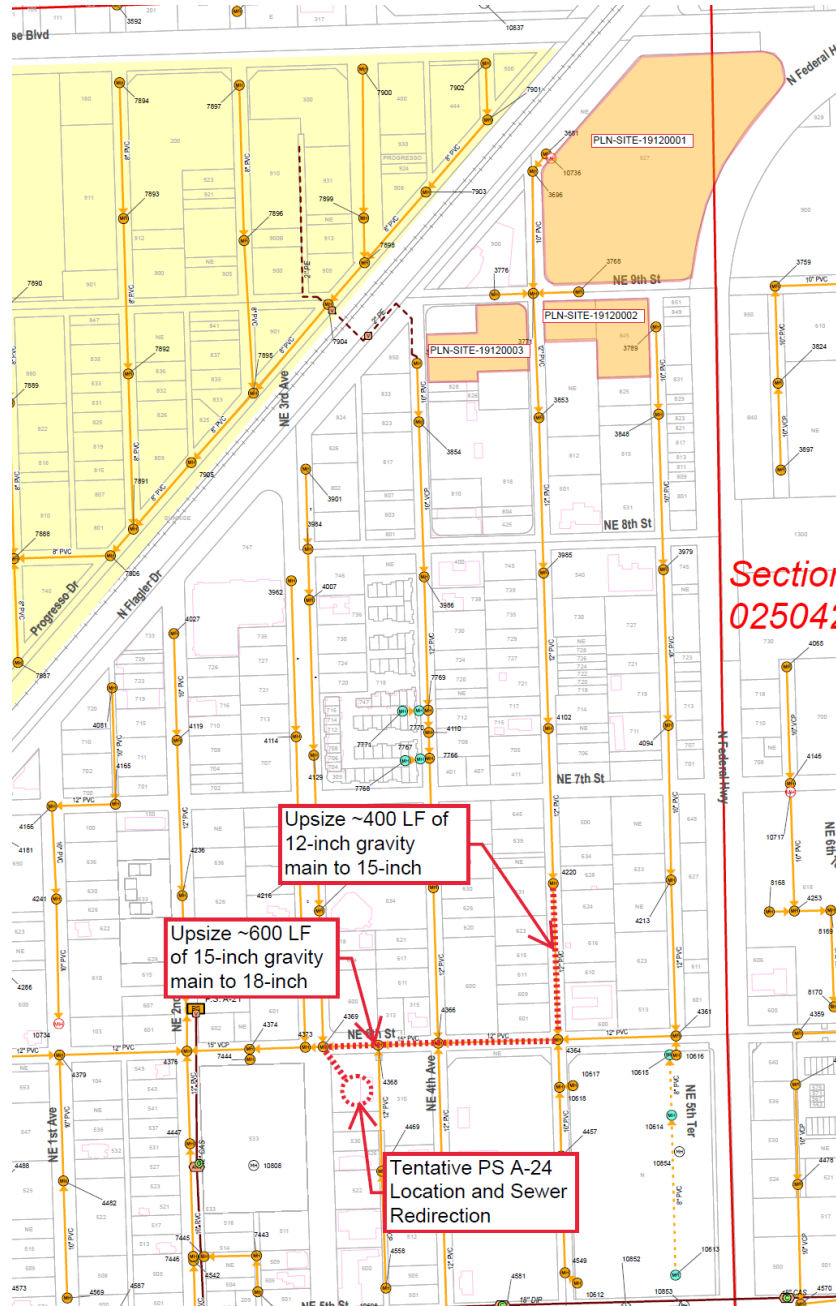


Figure 3 – Recommended Improvements



**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 239171 gallons per day (GPD), which equates to 0.2392 MGD. Average day water use demands are calculated by reducing the calculated max day water use demands by a factor of 1.18. 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 8-inch water mains along NE 4<sup>th</sup> Avenue and NE 5<sup>th</sup> Avenue and the 12-inch water main along N Flagler Drive. The InfoWater hydraulic model was analyzed to determine the impact of this development on the existing water mains and it was determined that the existing infrastructure can sufficiently serve the project.

**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 31.02 MGD. The previously committed demand from development projects in the permitting or the construction stage is 5.01 MGD. Combining these figures with the demand from the proposed project of 0.2392 MGD, the required production would be 36.27 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.

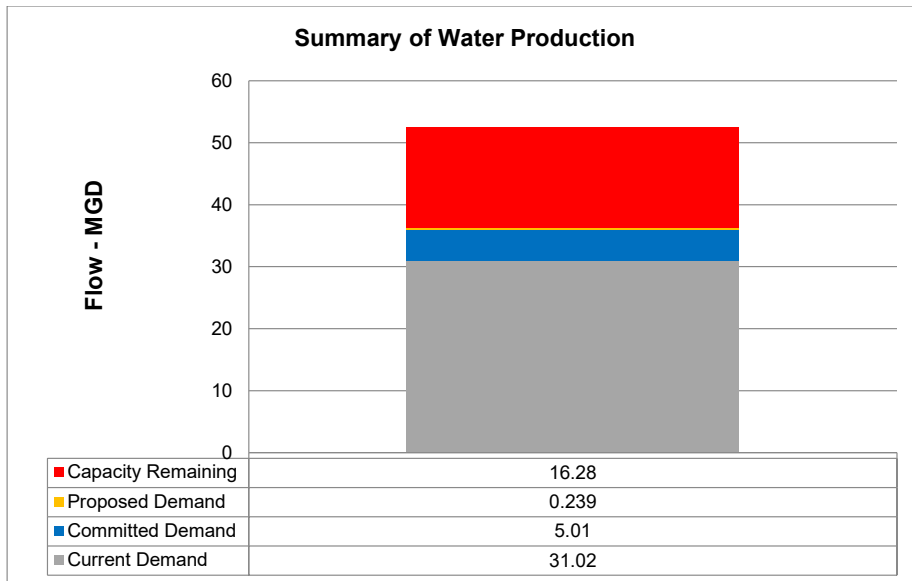


Figure 4



**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 164629 GPD, which equates to 0.1646 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 12-inch gravity sewer main along NE 5<sup>th</sup> Avenue. 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 above the City's governance plan threshold of 70% during peak flows. Therefore, the pipes downstream of the developments will have to be upsized to handle the flow increase from the proposed development.

**Evaluation of impact on pumping station:** PS A-24 is proposed to have a duty point of 2200 gallons per minute (GPM) and a Nominal Average Pumping Operating Time (NAPOT) of approximately 1.41 hours per day of equivalent run time for this VFD Pump. Based on projected sewage flows, the pumping run times would increase approximately 75 minutes per day. Additionally, there are other committed flows from proposed developments within the PS A-24 basin resulting in 137.54 minutes of additional runtime. PS A-24 will have a NAPOT of 4.95 hours once the proposed developments are complete, less than the recommended average of 10 hours per day. It is anticipated that once A-24 is on-line it will receive 1/2 of the existing flows from the current A-21 basin, resulting in a current NAPOT of approximately 1.41 hours. This puts the projected NAPOT at 4.95 hours. See Figure 5 below.

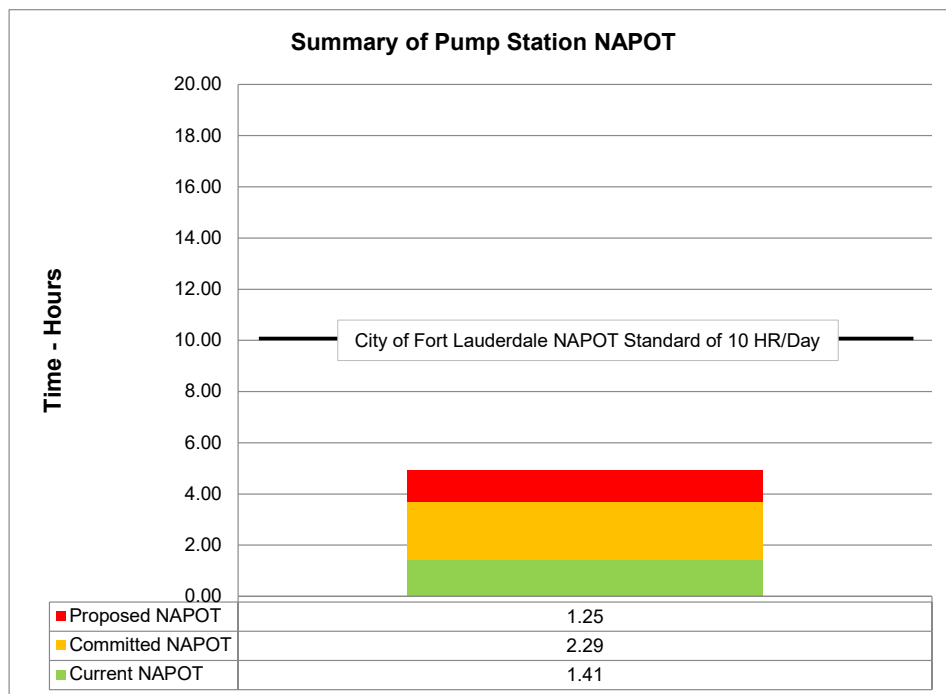


Figure 5

**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 42.80 MGD. Combining the committed flows for previously approved projects of 4.04 MGD plus the 0.1646 MGD net contribution from the project results in a total projected flow of 47.00 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.

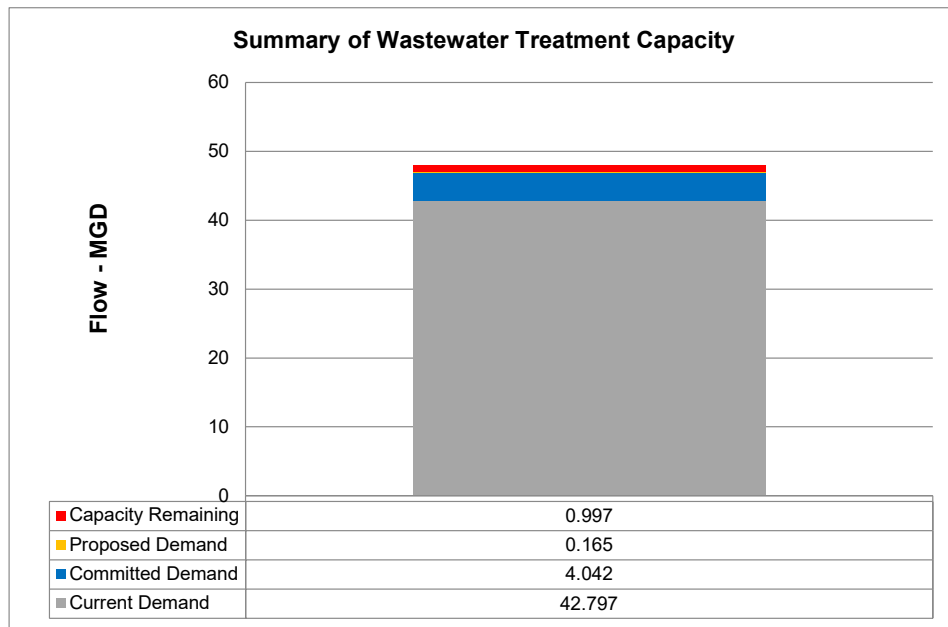


Figure 6

**Recommended Wastewater Infrastructure Improvements:**

PS A-21 currently does not have sufficient capacity to handle the proposed development. The new Pump Station PS A-24 shall be constructed to handle the flow from the proposed development.

Approximately 400 linear feet (LF) of 12-inch gravity sewer shall be upsized to a 15-inch pipe along NE 5<sup>th</sup> Avenue and approximately 600 LF of 15-inch gravity sewer shall be upsized to an 18-inch pipe along NE 6<sup>th</sup> Street.

All recommended upgrades to the sewer system should be completed and on-line prior to the proposed development seeking a Certificate of Occupancy.