CITY OF
FORT LAUDERDALE

March 3, 2025

Austin Bouchard
Kimley-Horn and Assiciates
8201 Peters Road, Suite 2200
Plantation, FL 33324

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER REVISION 1**
8th Avenue Hotel – DRC Case No. UDP-A24053
104 SE 8th Avenue, Fort Lauderdale, FL 33301

Dear Austin Bouchard,

According to the information submitted, the project consists of the construction of a 172-unit hotel. There are proposed water and sewer connections to City of Fort Lauderdale (City) utilities along SE 8th Avenue and SE 2nd Street. This project lies within the City's Pump Station (PS) A-13 basin and will increase the average day water demand by approximately 0.0380 million gallons per day (MGD) and the average day sewer demand by approximately 0.0261 MGD. The existing water infrastructure has the capacity to support the proposed development. The sewer infrastructure requires improvements to meet the increased demand of the proposed project. The sewer improvements shall be constructed, certified, and in operation prior to issuance of any Certification of Occupancy.

The determination of capacity availability is based upon an analysis of the City's water and sewer system models, average daily flows at the treatment plants, and previously committed flows, as of the date of this letter, in conjunction with the demand created by the proposed subject project. Availability of capacities, as calculated in the attached analysis, is not guaranteed and no existing system capacity shall be considered "reserved" for this project until development permit approval has been achieved and all fees have been paid. Once the development permit has been received for this project, the city shall reserve the necessary capacity to serve the development.

If there are changes to the proposed development after issuance of this capacity availability letter, and/or before development permit approval has been received, the Owner or Owner's authorized representative for the subject project must submit a revised request based on the updated plans.

If, at the time of building permit application, there are changes to the proposed development that require a new development permit or an amendment to an existing development permit which result in a change of the water and sewer demand, the City shall re-evaluate the availability of capacities and a new letter shall be obtained. If sufficient capacities for the increased demand are not available at that time, the City may deny the permit application or ask the Owner/Developer to submit an alternate design for consideration prior to approval.

If a development permit is not approved within one year of this letter being issued, the information contained in this letter will expire and a new letter shall be required prior to development approval.

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: Talal Abi-Karam, P.E., Assistant Public Works Director
Omar Castellon, P.E., Assistant Public Works Director
Benjamin Restrepo, P.E., City Engineer
Orlando Arrom, Land Development Manager
File: Water and Sewer Capacity Letters

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

8th Avenue Hotel – DRC Case No. UDP-A24053
104 SE 8th Avenue, Fort Lauderdale, FL 33301

PROJECT AND DESCRIPTION

The project consists of the construction of a 172-unit hotel.

DESCRIPTION OF EXISTING UTILITIES

Water: The site is currently served by an 8-inch water main along SE 2nd Street, south of the project site. See Figure 1.

Wastewater: The site is currently served by an 8-inch gravity sewer main to the west of the project site along SE 8th Avenue. See Figure 2.

Pumping Station: The site is served by PS A-13 which is located along SW 2nd Court.

SUMMARY OF ANALYSIS AND REQUIRED ACTION

The existing water infrastructure has the capacity to support the proposed development. The sewer infrastructure requires improvements to meet the increased demand of the proposed project, see Figure 3 Required Improvements. The improvements shall be constructed, certified, and in operation prior to issuance of any Certificate of Occupancy.

Figure 1 – City Water Atlas

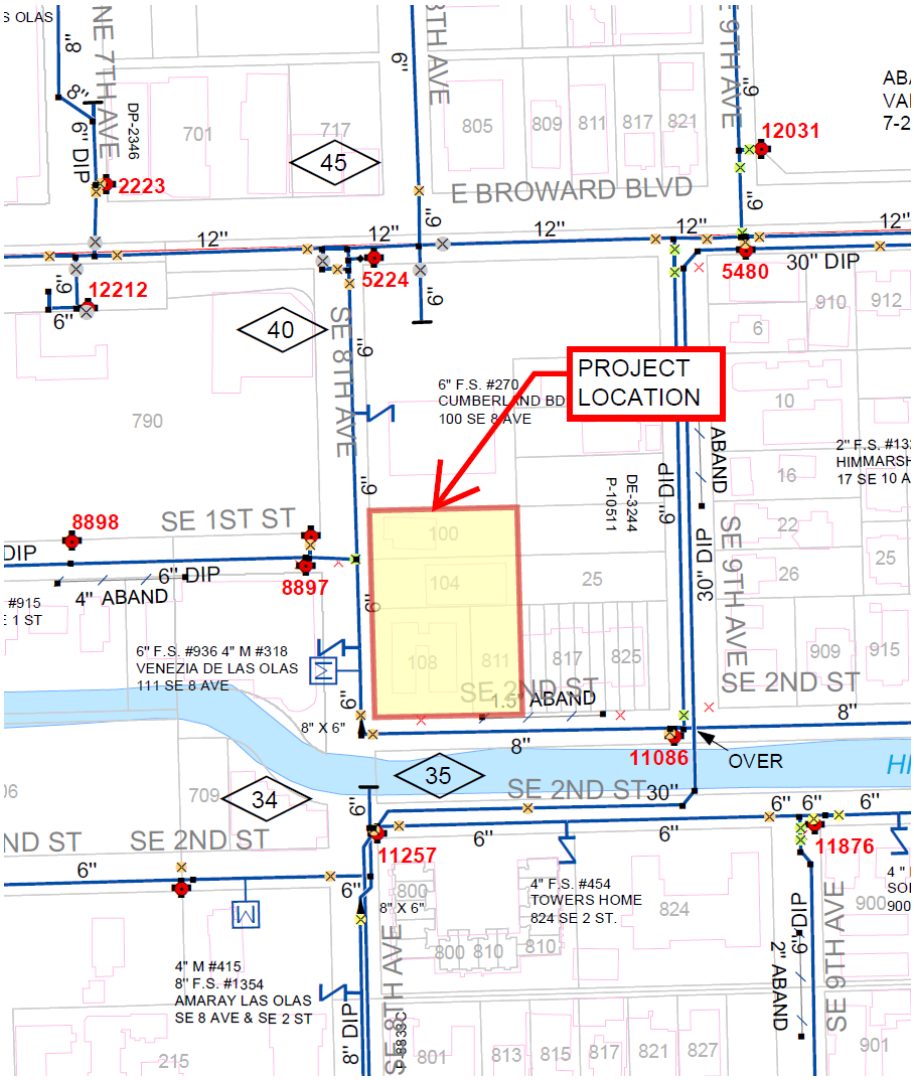


Figure 2 – City Sewer Atlas

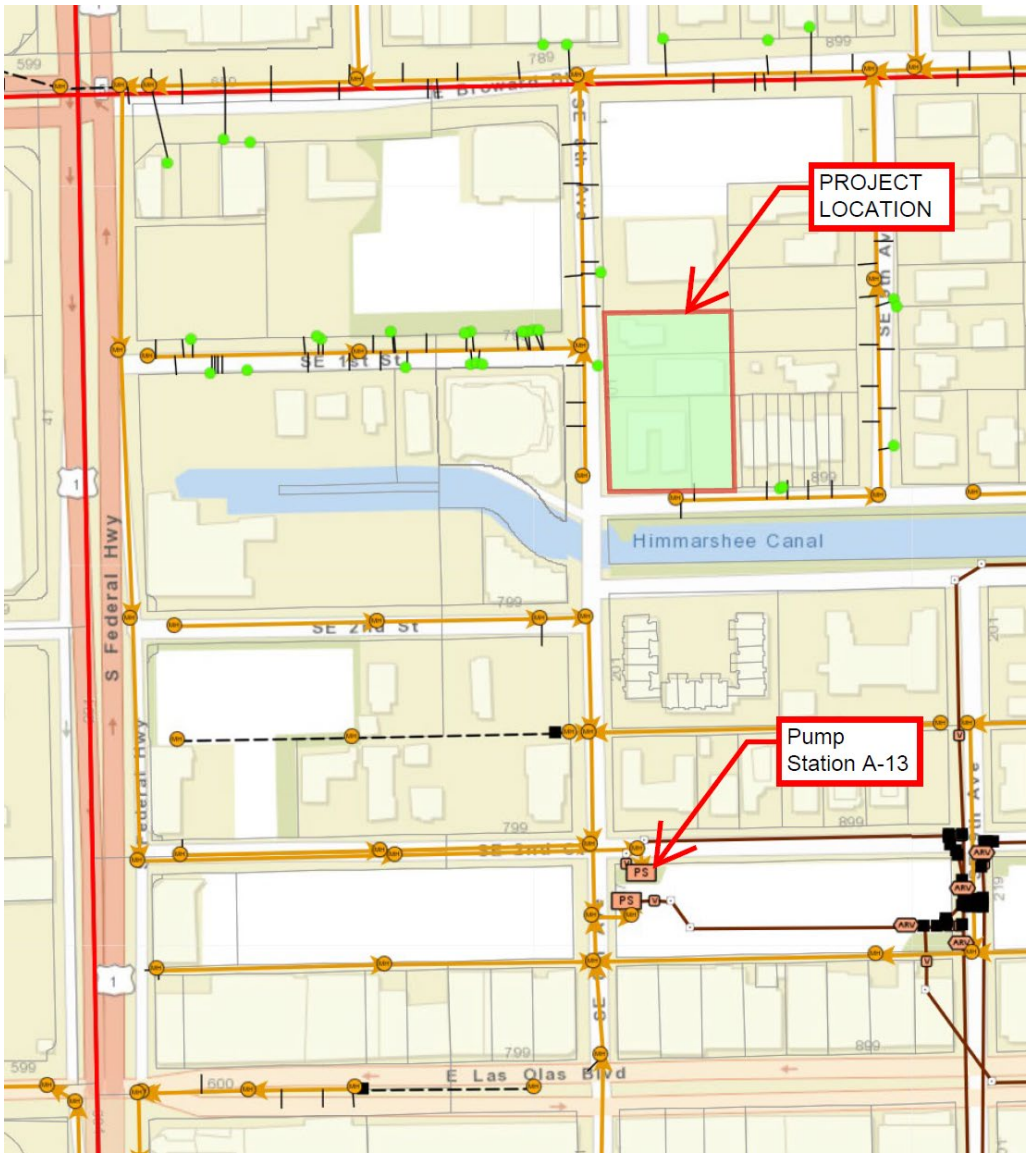
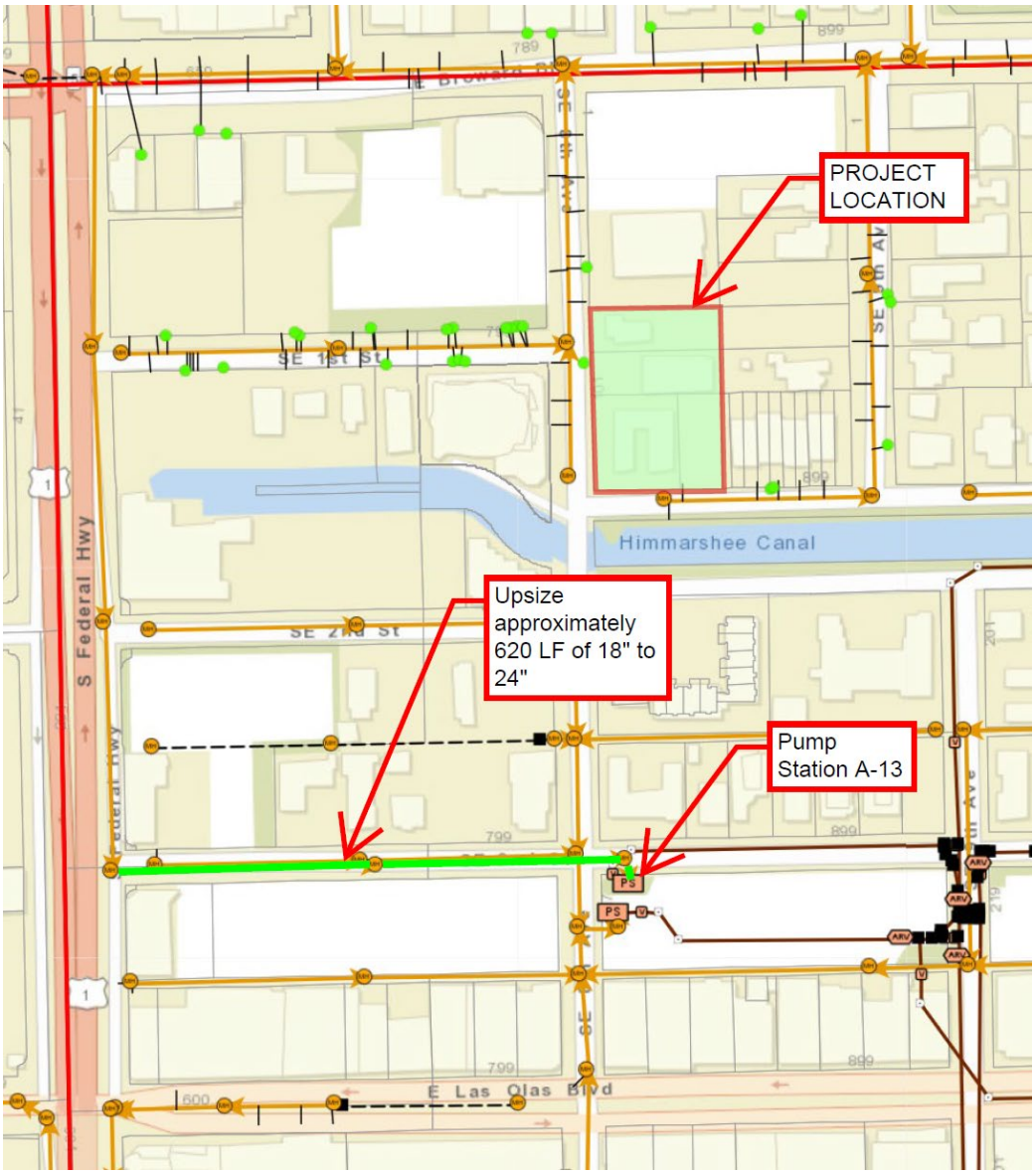


Figure 3 – Required Sewer Improvements



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 37957 gallons per day (GPD), which equates to 0.0380 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 existing 8-inch water main along SE 2nd Street. The InfoWater hydraulic model was analyzed to determine the impact of this project on the existing 8-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 38.37 MGD. The previously committed demand from development projects in the permitting or the construction stage is 5.96 MGD. Combining these figures with the demand from the proposed project of 0.0380 MGD, the required production would be 44.36 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.

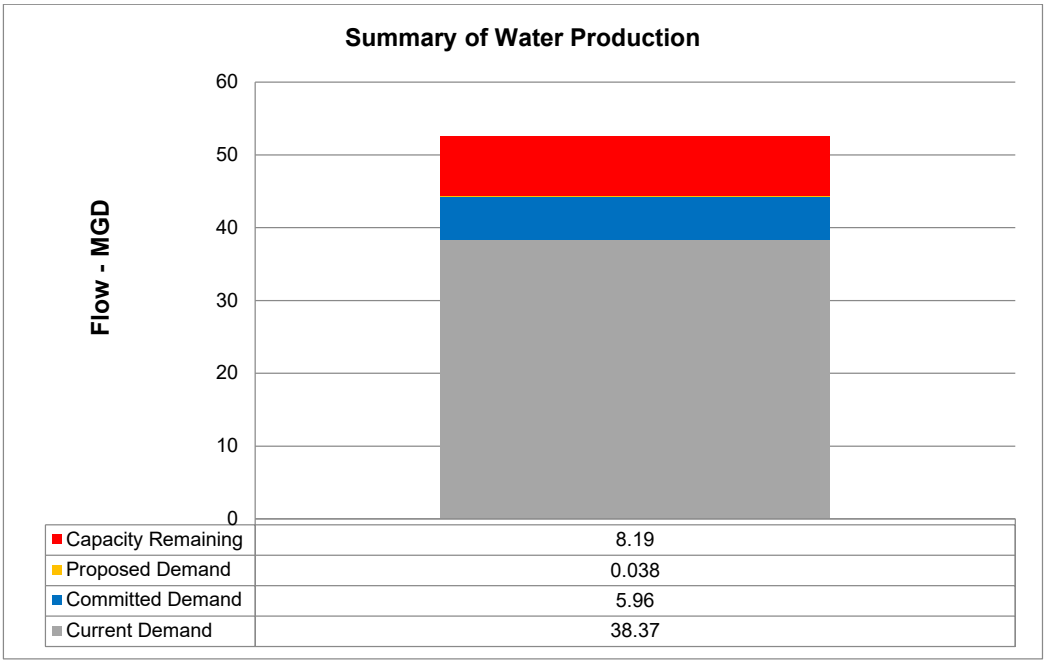


Figure 4

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 26127 GPD, which equates to 0.0261 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 existing 8-inch gravity sewer main to the west of the project site along SE 8th Avenue. 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 higher than the City's governance plan threshold of 70% during peak flows. Therefore, the pipes downstream of the developments are not adequate to serve the proposed project and improvements will be required.

Evaluation of impact on pumping station: PS A-13 has a duty point of 2087 gallons per minute (GPM) and has a Nominal Average Pumping Operating Time (NAPOT) of approximately 2.46 hours per day. Based on projected sewage flows, the pumping run times would increase approximately 13 minutes per day. Additionally, there are other committed flows from proposed developments within the PS A-13 basin resulting in 83.73 minutes of additional runtime. PS A-13 will have a NAPOT of 4.06 hours once the proposed developments are complete, less than the recommended average of 10 hours per day. See Figure 5 below.

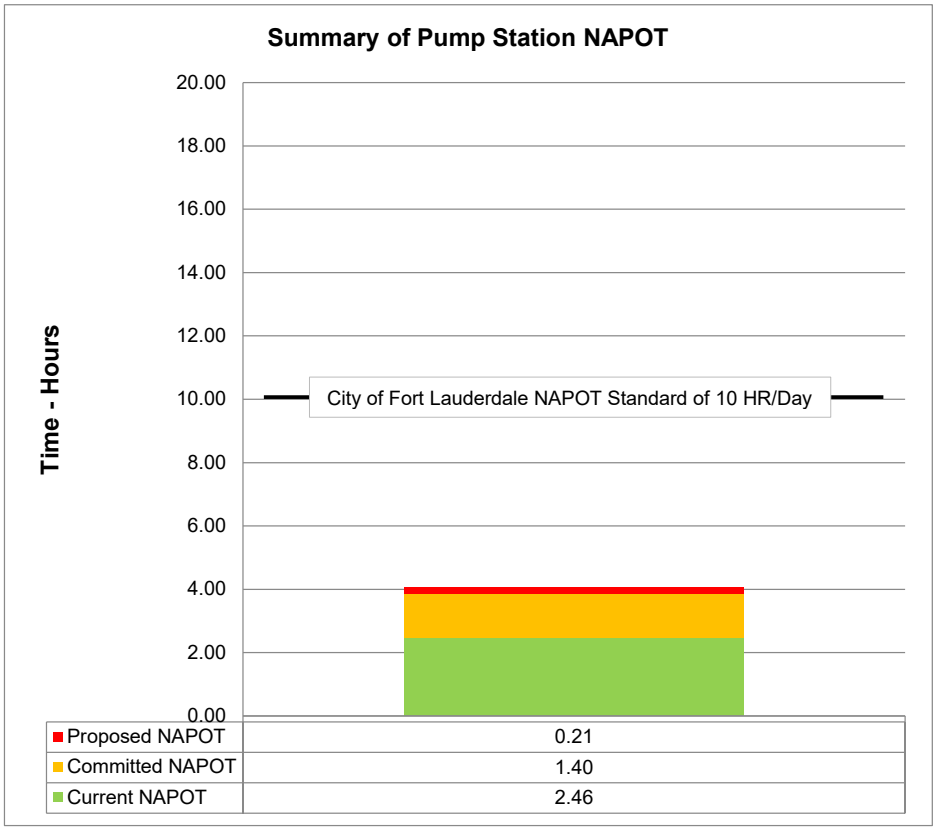


Figure 5

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 Florida Department of Environmental Protection's (FDEP) permitted capacity for GTL is 61.58 MGD-TMADF (Million Gallons per Day – Three Month Average Daily Flow). The three-month average daily flow (TMADF) to the plant is 41.62 MGD. Combining the committed flows for previously approved projects of 4.65 MGD plus the 0.0261 MGD net contribution from the project results in a total projected flow of 46.30 MGD. This is less than the permitted treatment plant capacity of 61.58 MGD. Therefore, the treatment plant has sufficient capacity to serve this project. See Figure 6 below.

Recommended Wastewater Infrastructure Improvements: Approximately 620 LF of existing 18-inch gravity sewer will have to be upsized to 24 inches. (see Figure 3). The improvements shall be constructed, certified, and in operation prior to issuance of any Certificate of Occupancy.

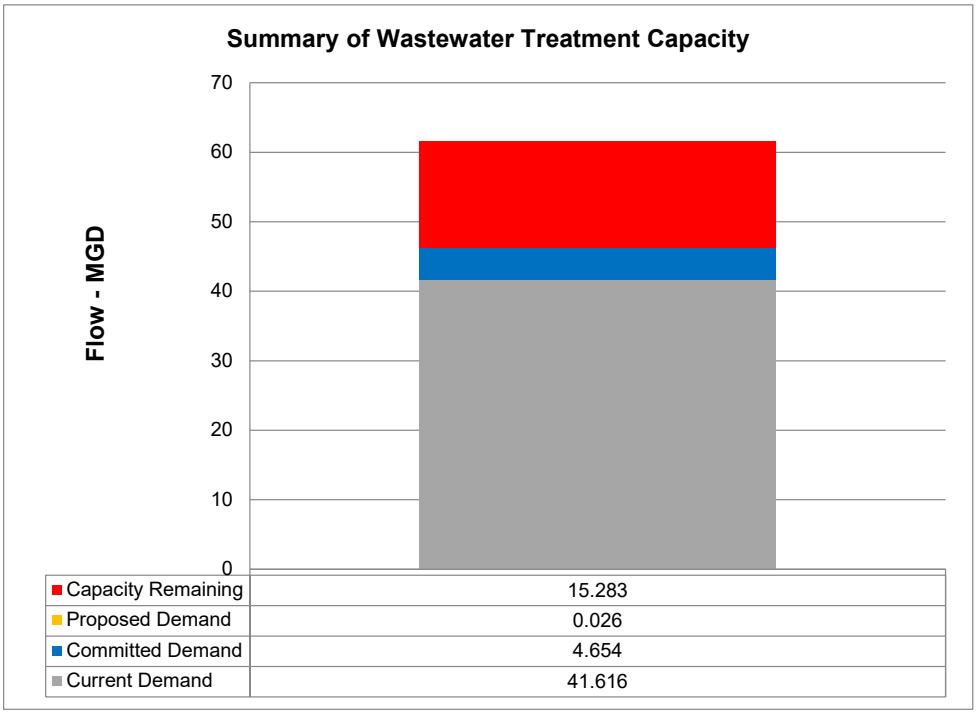


Figure 6