PROJECT ADDRESS: 3016 Bayshore Drive

Date request was received: 09/24/2021

DRC CASE#: R18058

Project Name: Bayshore Hotel

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

X 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: ivassiliev@fortlauderdale.gov

September 30, 2021

Andres Mizrahi, E.I.
KEITH
301 East Atlantic Blvd,
Pompano Beach, Florida 33060

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER**
Bayshore Hotel – DRC R18058
3016 Bayshore Drive, Fort Lauderdale, Florida 33304

Dear Mr. Mizrahi,

According to the information submitted, the project consists of constructing a multi-tenant building with 115 condominium/apartment units, 168 hotel rooms, 2,390 S.F. of bar/cocktail lounge space, and 3,150 S.F. of merchandizing/retail space. It will replace four existing buildings with total of 89 hotel rooms. This project lies within the City's Pump Station (PS) D-31 basin and will increase the average day water demand by 0.0508 million gallons per day (MGD) and the average day sewer demand by 0.0386 MGD. The existing water infrastructure has the capacity to support the proposed development and no improvements are needed. The existing sewer infrastructure needs improvements to accommodate the demand from the proposed development.

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
Dennis Girisgen, P.E., City Engineer
File: Water and Sewer Capacity Letters

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

Bayshore Hotel – DRC R18058
3016 Bayshore Drive, Fort Lauderdale, Florida 33304

PROJECT AND DESCRIPTION

The project consists of constructing a multi-tenant building with 115 condominium/apartment units, 168 hotel rooms, 2,390 S.F. of bar/cocktail lounge space, and 3,150 S.F. of merchandizing/retail space.

DESCRIPTION OF EXISTING UTILITIES

Water: The site is currently served by a 12-inch water main along North Birch Road, see Figure 1.

Wastewater: The site is currently served by an 8-inch gravity sewer main on Bayshore Drive and a 10-inch gravity sewer main on North Birch Road, which conveys flow downstream to a 15-inch sewer on North Birch Road and to pumping station D-31, see Figures 2 and 3.

Pumping Station: The site is served by Pumping Station D-31 (PS D-31) located at Las Olas Circle and South Birch Road.

SUMMARY OF ANALYSIS AND REQUIRED ACTION

Existing water infrastructure has sufficient capacity to serve the project with no improvements required. Existing wastewater infrastructure does not have sufficient capacity to serve the project. The applicant will be required to upsize existing gravity sewer system to handle proposed flow increase. A memorandum of agreement (MOA) shall be required between the City and the applicant to coordinate the design requirements and construction of the improvements.

Figure 1 – City Water Atlas

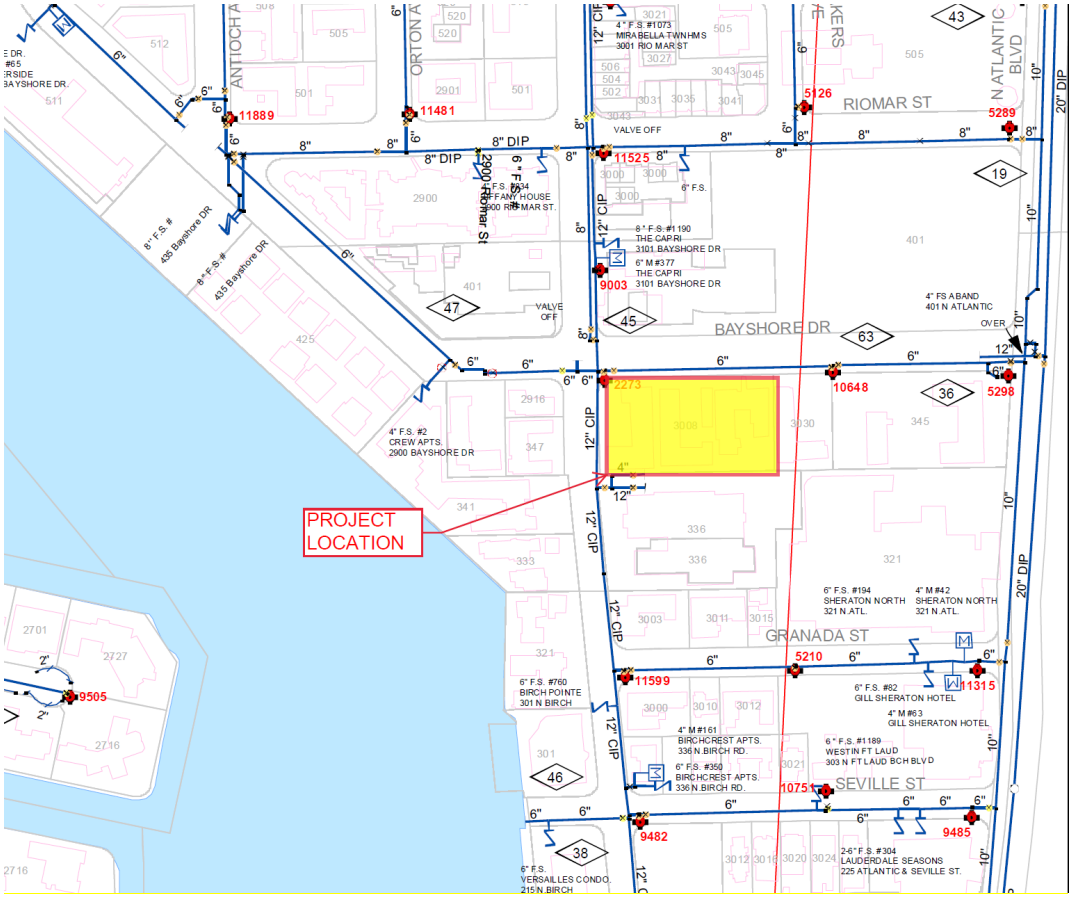


Figure 2 – City Sewer Atlas

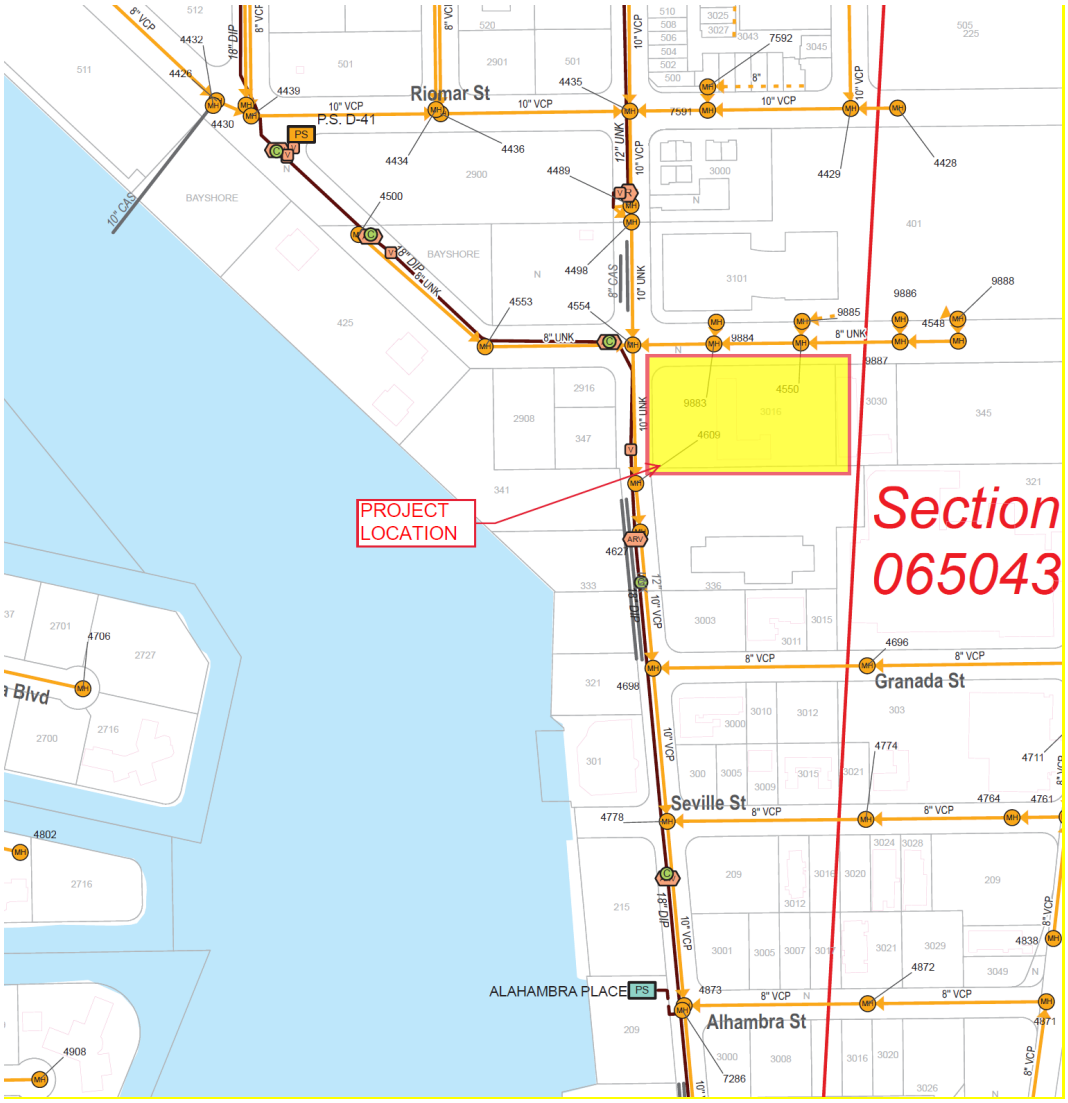
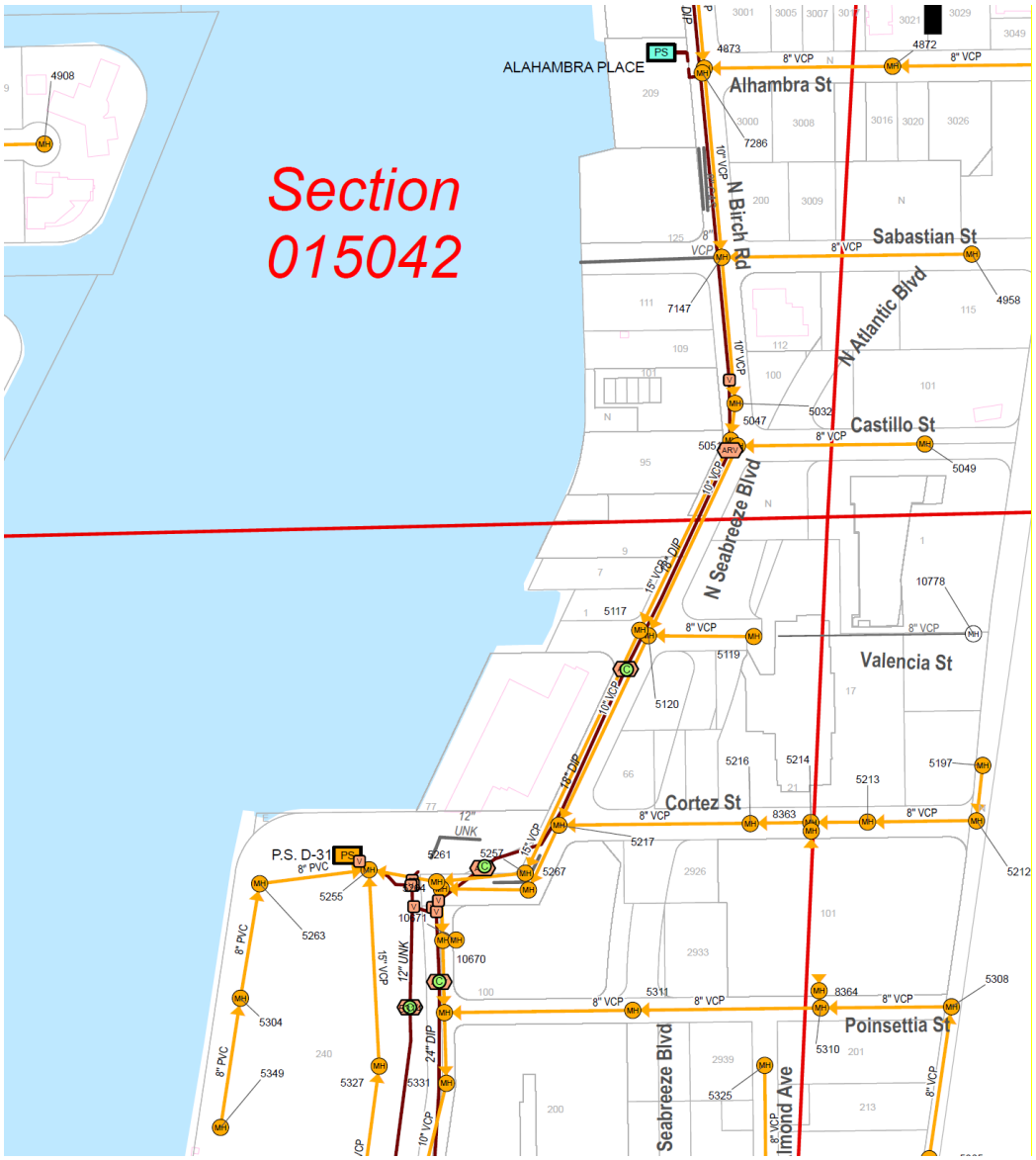


Figure 3 – City Sewer Atlas



WATER CAPACITY ANALYSIS

Requested Demand: Based on the applicant's site plan and building use information, the estimated average day potable water demand is 50,859 gallons per day (GPD), which equates to 0.0508 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 (condition & capacity): According to the site plan, the applicant is proposing to utilize the 12-inch water main along North Birch Road. 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 38.45 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 0.0508 MGD, the required production would be 43.28 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.

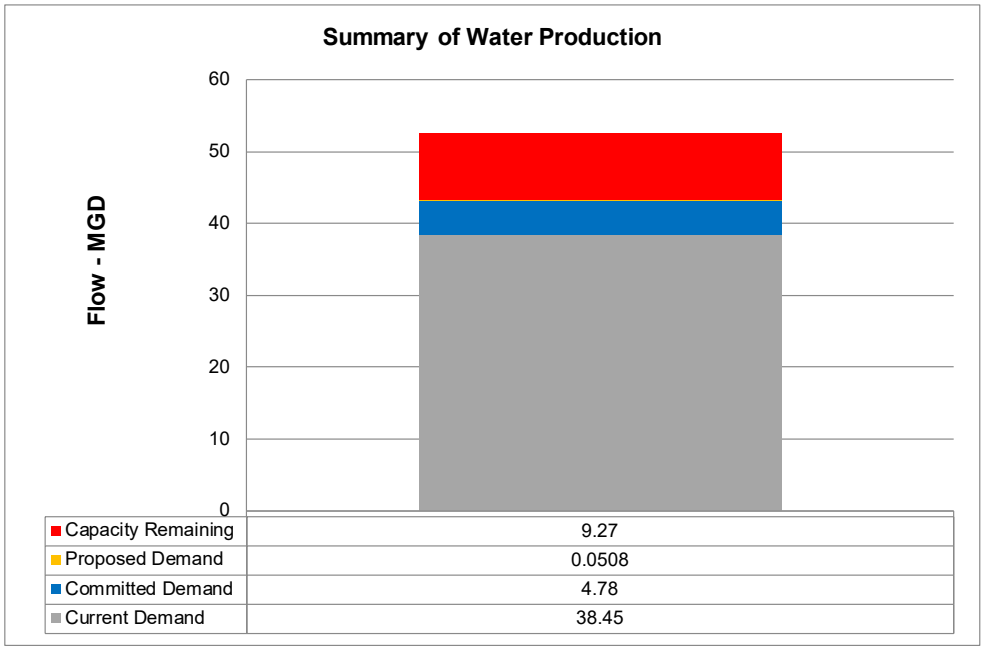


Figure 4

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 38,568 GPD, which equates to 0.0386 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 (condition and capacity): According to the site plan, the site is currently served by an 8-inch gravity sewer main on Bayshore Drive and a 10-inch gravity sewer main on North Birch Road, which conveys flow downstream to a 15-inch sewer on North Birch Road and to pumping station D-31. 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 8-inch sewer on Bayshore Drive and the downstream 10-inch sewer on North Birch Road downstream of the proposed development will flow more than the ASCE-recommended 50% full during peak flows. Therefore, the pipes downstream of the developments do not have adequate capacity to serve the project.

Evaluation of impact on pumping station: PS D-31 has a duty point of 1600 gallons per minute (GPM) and has a Nominal Average Pumping Operating Time (NAPOT) of approximately 3.29 hours per day. Based on projected sewage flows, the pumping run times would increase approximately 24 minutes per day. Additionally, there are other committed flows from proposed developments within the PS D-31 basin resulting in 64.65 minutes of additional runtime. PS D-31 will have a NAPOT of 4.77 hours once the proposed developments are complete, less than the recommended average of 10 hours per day. See Figure 5 below.

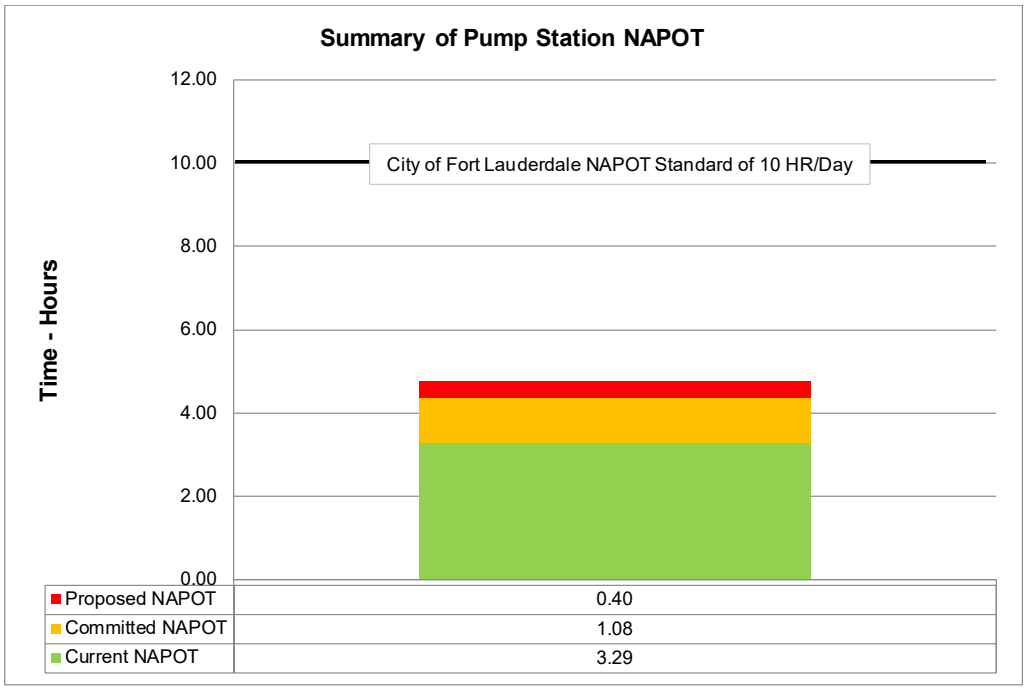


Figure 5

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 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 40.67 MGD. Combining the committed flows for previously approved projects of 4.62 MGD plus the 0.0386 MGD net contribution from the project results in a total projected flow of 45.33 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.

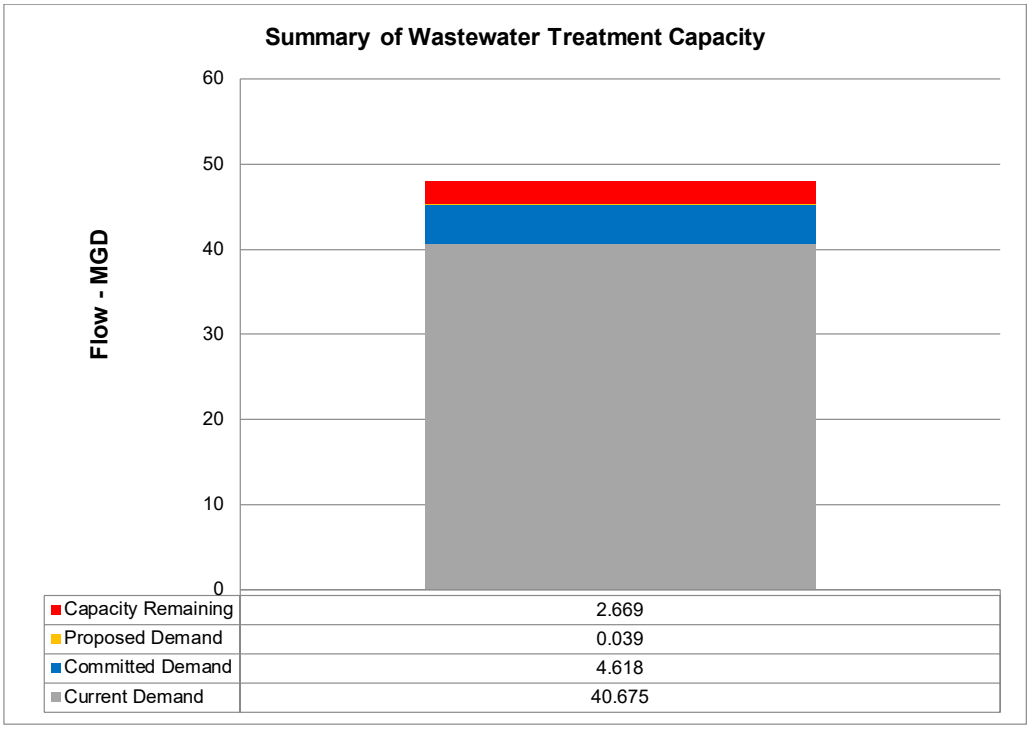


Figure 6

Recommended Wastewater Infrastructure Improvements: The applicant will be required to upsize the existing gravity sewer system to handle proposed flow increase. It is recommended that the 8-inch gravity sewer on Bayshore Drive be upsized to 10-inch (approximately 250 feet), and the 10-inch sewer on North Birch Road downstream of the proposed development be upsized to 15-inch sewer (approximately 1,700 feet). A memorandum of agreement (MOA) shall be required between the City and the applicant to coordinate the design requirements and construction of the improvements.