

18. WASTEWATER MANAGEMENT

- A. Provide, in the table given below, the projected wastewater generation at the end of each phase of development and proposed wastewater treatment. Identify the assumptions used to project this demand.**

The table below presents the wastewater generation calculations and sources:

TABLE 18-1 WASTEWATER FLOWS				
Land Use	Number of Units	Sewage Loading (GPD/Unit)	Sewage Flows (MGD)(*)	Peak Sewage Flows (MGD)
Single Family, detached	1,029 du	310 gpd/unit	0.319	1.276
Single Family, attached	4,532 du	165 gpd/unit	0.748	2.991
Multi-Family	2,239 du	135 gpd/unit	0.302	1.209
Retail	673,902 sf	5/100 gpd/sf	0.034	0.106
Office	500,000 sf	5/100 gpd/sf	0.025	0.079
Industrial – Flex Space	892,484 sf	2/100 gpd/sf	0.018	0.029
School				
	3,863 stud.	20 gpd/stud	0.077	0.144
Staff	360	15 gpd/person	0.005	0.011
Total			1.528	5.846

Source: Langan Engineers.

(*) MGD= Millions of Gallons per Day

The Average Daily Flow (A.D.D.) is 1.528 MGD
 The Peak Sewage Flow is 5.846 MGD

Rates were obtained from Miami-Dade County sewage flows used by the Miami-Dade County Water and Sewer Department (Miami-Dade County Code Section 24-43 (5) Sewage Loading).

- B. If applicable, generally describe the volumes, characteristics and pre-treatment techniques if any industrial or other effluents prior to discharge from proposed industrial-related use(s).**

No pretreatments are anticipated. In the event the industrial use requires a pre-treatment system, it will be design in accordance with FDEP and Miami-Dade County requirement for sanitary effluents.

- C. 1. If off-site treatment is planned, identify the treatment facility and attach a letter from the agency or firm providing the treatment outlining present and projected excess capacity of the treatment and transmission facilities through build-out, any other commitments that have been made for this excess and a statement**

of ability to provide service at all times during or after development.

Offsite treatment will be provided by Miami-Dade County Water and Sewer Department. A letter to Miami-Dade Water and Sewer requesting the above information has been requested and is in Exhibit 17-1 of the Water Supply section as it is addressed to Maria Valdes for both Water Supply and Wastewater Management. A response letter from Miami-Dade Water and Sewer is also included.

2. If service cannot be provided, identify the required capital improvements, cost, timing, and proposed responsible entity necessary to provide service at all times during and after development.

To be determined. City Park is planning to install an on-site reuse treatment facility to provide irrigation water to the project. It is expected that approximately 25% of the wastewater will be captured and used for reuse. The cost and operating entity will be determined during permitting and design.

D. If septic tanks will be used on site, indicate the number of units to be served, general locations and any plans for eventual phase-out.

No septic tanks are proposed. The project in its entirety will be served by public sanitary sewer lines.

E. Indicate whether proposed wastewater service will be provided within an established service area boundary.

When the project is brought within the Urban Development Boundary, Miami-Dade Water and Sewer Department will have the closest points of connection and would be the agency to provide service. The service area boundary will be limits of the overall development program shown on the survey provided.

F. Applicant shall coordinate with Miami-Dade County Water and Sewer Department to develop a proposed water and sewer spine infrastructure network. The project shall evaluate the feasibility of greywater sources since the total project demand will be greater than 1 MGD, while identifying water use efficiency techniques in accordance with Miami-Dade County Code.

The applicant is currently coordinating with Miami-Dade County Water and Sewer Department (MDWASD) on identifying the proposed water and sewer spine network. Results of the MDWASD analysis will be provided upon receipt.

Please refer to the Water and Sewer Master Plan Exhibit 17-2 for a preliminary infrastructure requirement for the overall development program. MDWASD and the applicant are currently evaluating potential greywater sources for the project. The project will utilize groundwater wells and the proposed stormwater lakes to provide irrigation supply for the development program to reduce the potable water demand. The project will comply with Miami-Dade County Code Article III

Section 8-31 which regulates water compensation flow rates for all plumbing fixtures. The high efficiently plumbing fixtures and appliance shall comply with the table requirements per Miami-Dad County code or have received the U.S. Environmental Protection Agency (EPA) WaterSense Label.