

**17. WATER SUPPLY**

- A. 1. Provide a projection of the average daily potable and non-potable water demands at the end of each phase of development. If significant seasonal demand variations will occur, discuss anticipated peaks and duration. Use the format below:**

Estimated average daily potable water and non-potable water demands for the Beacon Countyline development are provided in **Table 17.A.1 (R), Average Daily Potable Water Demand** and **Table 17.A.2, Average Non-Potable Water Demand for Irrigation (High Period)**. Potable water demand estimates are an average daily demand based on full year-round occupancy. Seasonal variations are not expected to be significant.

<b>Table 17.A.1 (R2)</b>					
<b>Average Daily Potable Water Demand</b>					
<b>Proposed Development</b>			<b>Potable Water Demand</b>		
<b>Use</b>	<b>Amount</b>	<b>Units</b>	<b>Rate* (Gallons Per Day, GPD)</b>		<b>Demand**</b>
Warehouse	4,300,000	Sq. Ft.	0.02	GPD/Sq. Ft.	86,000
Office	750,000	Sq. Ft.	0.10	GPD/Sq. Ft.	75,000
Retail	320,000	Sq. Ft.	0.05	GPD/Sq. Ft.	16,000
Restaurant - Fast Food	338	Seat	35.00	GPD/Seats	12,000
Restaurant - Full Service	300	Seat	50.00	GPD/Seats	15,000
Hotel	350	Rooms	100.00	GPD/Room	35,000
<b>Total Gallons Per Day Demand</b>					<b>239,000</b>

Source: PBS&J

\* Potable water demand rates are the equivalent of sewer flow rates set forth in Sec. 24-13(5) of the Code of Metropolitan Dade County for the County's use in determining sewage flows. See ADA Section 17A for a discussion on methods and assumptions used to derive rates for the proposed general use categories from categories provided in the Code.

\*\* Rounded to the nearest 1,000 gallons per day.

Landscape irrigation will account for most of the development's non-potable water demand, and this demand will vary seasonally. Greatest demand will occur during periods of high plant growth and low rainfall, generally the late spring and early summer months. The estimate in **Table 17.A.2 (R) – Average Non-Potable Water Demand for Irrigation (High Period)** is based on irrigation in this high demand period.

TABLE 17.2 (R) Average Non-Potable Water Demand for Irrigation (High Period)			
Proposed Development		Irrigation Water Demand*	
Use	Acres	Acres Requiring Irrigation	Gallons Per Day
Warehouse	275	10% of Total	106,700
Office	55	10% of Total	21,340
Retail and Restaurants	51	10% of Total	19,788
Hotel	8	20% of Total	6,208
City Park	60	60% of Total	139,680
Total Gallons Per Day Demand			293,716

Source: PBS&J

\* Estimates are for application of one inch weekly to areas requiring irrigation, representing usage in a warm period with low rainfall. The estimates assume that 10% of warehouse, office and retail tracts, and 20% of the hotel site, will require irrigation. The acreage shown for the City Park is the size of the land being dedicated to the City of Hialeah. It is anticipated that the areas being irrigated would be limited to the playing fields and landscaping in the parking lots and next to the buildings. Thus, 60% of the site or 36 acres would be irrigated.

**2. Describe how this demand information was generated, including the identification of the consumption rates assumed in the analysis.**

Consistent with the practice and custom of the Miami-Dade County Water and Sewer Department, potable water and wastewater flow demand estimates are based on their ‘Schedule of Daily Rated Gallonage for Various Occupancy’. The estimate assumes that all potable water used enters the wastewater system. Land use categories from the ordinance were applied to the proposed uses as follows:

**Warehouse** – Used the Warehouse Industrial building rate of 20 gallons per day per 1,000 square feet (20 gpd per 1,000 sq. ft.)

**Office** – Used the Office building rate of 10 gpd per 100 sq. ft.

**Retail** – As requested by the Miami-Dade Department of Environmental Resource Management (DERM), Table 17.1 has been revised to provide an estimate of restaurant potable water demand as a separate component of the proposed 350,000 square feet of retail use. The revised estimate was produced as follows:

- Assumed ten fast food restaurants occupying a total of 15,000 square feet and containing 338 seats total based on typical characteristics of fast food restaurants, and applied the 35 gpd per seat rate to these seats.
- Assumed three full-service restaurants occupying a total of 15,000 square feet and containing 300 seats total based on typical characteristics of full-service restaurants, and applied the 50 gpd per seat rate to these seats.
- Applied the 5 gpd per 100 sq. ft. rate for the “Shopping Center (dry uses)” category to the remaining 320,000 square feet of retail space not assumed to be restaurants as explained above.

**Hotel** – Used the hotel/motel rate of 100 gpd per room.

Non-potable water demand estimates assign one inch weekly to areas requiring irrigation, representing usage in a warm period with low rainfall. The estimates assume that 10 percent of warehouse, office and retail tracts, and 20 percent of the hotel site, will require irrigation.

The Applicant proposes to offer a 60-acre site in the south and/or the southeast corner to the City of Hialeah for development of public park/recreation and/or other public facilities. Potable water demand attributed to this area is expected to nominal. It is anticipated that the areas being irrigated would be limited to the playing fields and landscaping in the parking lots and next to the buildings. Thus, the demand for non-potable water is based on 60% of the site or 36 acres being irrigated

Miami-Dade County developed water conservation recommendations that are intended to achieve higher water use savings. These recommendations were adopted in Ordinance No. 08-14 on February 5, 2008. The Applicant proposes to comply with the Ordinance. Additionally, the Applicant proposes to utilize water conservation measures in the irrigation system to minimize the volume of ground water withdrawal. These measures would include but not be limited to planting xeriscape plant material, low flow irrigation heads, irrigating at night and minimizing the area being irrigated.

**B. Provide a breakdown of sources of water supply, both potable and non-potable, by development phase through project completion. Use the format below.**

The Property is in the City of Hialeah and will be served by the City's municipal water distribution system. The Applicant will pursue a service agreement with the City which will set forth terms for providing potable water service for the proposed development. The service agreement may also address extension of reclaimed water service to the Site at such time as it becomes feasible and practicable.

Miami-Dade Water and Sewer Department (WASD) supply the City of Hialeah with potable water. The City and WASD are in the process of finalizing a new wholesale water service agreement. This project would be included in WASD's water allocation system once that agreement has been approved. In the interim, the project would receive water through that allocation. The project would then receive water service from the City's Reverse Osmosis (RO) water plant which is scheduled for completion by 2011.

The City of Hialeah has committed to building a Floridian Aquifer- sourced RO water plant to increase the City's long-term capacity. It is understood the facility will be located within or adjacent to the Beacon Countyline Property. The Applicant and the City have been working together with the goal of having the proposed RO plant operational by 2011.

For non-potable water, the Applicant proposes to construct a central irrigation water distribution system to serve the site. This system would include a pump station that would withdraw water from either the on-site lake or a shallow well. The proposed distribution system would be designed for the eventual connection to a reclaimed water source whenever it becomes available at the site. Operation of the ground

withdrawal pumping system would cease upon connection to the reclaimed water source. The proposed irrigation system would be designed to conform to the requirements of a reclaimed water system which would include the use of purple pipes.

- C. If water wells exist on-site, locate them on Map H and specify those that will continue to be used. Also locate on Map H all proposed on-site wells. (For residential developments, if individual wells for each lot are proposed, simply indicate the number of units to be served, general locations, and any plans for eventual phase-out.) Indicate the diameter, depth, and pumping rates (average and maximum) for each of the existing wells and project this information for the proposed wells (for lots served by individual dual wells, this information may be grouped for projection purposes). Also provide a breakdown of the wells with regard to potable and non-potable sources.**

There are no existing potable water or irrigation wells on the Site. As stated in **17.B** above, the Applicant proposes the construct a central irrigation water distribution system to serve the site. This system would include a pump station that would withdraw water from either the on-site lake or a shallow well. A water use permit would be obtained from the SFWMD at the time of design. If required, ground water modeling would be performed to confirm that SFWMD requirements are met. Should well be utilized, the Applicant would also coordinate with SFWMD and DERM to establish an appropriate location.

In addition to the Reverse Osmosis plant, the City intends to locate a Floridian Aquifer wellfield in and around the Property to supply the RO plant. The locations of the wells have not been determined however they would be defined during the SFWMD permitting process.

- D. If on-site water wells are used, will this result in interference with other water wells or result in adverse impacts to underlying or overlying aquifers? Document the assumptions underlying this response.**

As stated in **17.C** above, should well be utilized, the Applicant would also coordinate with SFWMD and DERM to establish an appropriate location. A water use permit would be obtained from the SFWMD at the time of design. If required, ground water modeling would be performed to confirm that SFWMD requirements are met.

- E. Who will operate and maintain the internal water supply system after completion of the development?**

The proposed service agreement referenced above will set terms for ownership and maintenance of facilities. However, it is anticipated that the potable water distribution system will be located in public rights-of-way or in easements that would be dedicated to the City's utility department. The system would be dedicated to the City who will be owned and maintained the system as part of the municipal system.

**F. 1. If an off-site water supply is planned, attach a letter from the agency or firm providing service outlining:**

**(a) the projected excess capacities of the water supply facilities to which connection will be made at present and for each phase through completion of the project,**

**(b) any other commitments that have been made for this excess capacity,**

**(c) a statement of the agency or firm's ability to provide services at all times during and after development. (This agency must be supplied with the water demand and supply tables in paragraphs A and B above).**

The Applicant has attached in **Exhibit 17.1 – Letters of Available Service** indicating the ability of the City of Hialeah and WASD to provide water services to the Project. The City responded in a letter dated July 23, 2008 and WASD responded in letters dated May 14, 2008 and July 15, 2008.

**2. If service cannot be provided at all times during and after development, identify the required capital improvements, timing, cost, and proposed responsible entity for each phase in which service is unavailable.**

The development schedule will be contingent on availability of sufficient treatment and distribution capacity to meet the development's needs. The Applicant will pursue an agreement with the City providing assurance that adequate capacity will be available to serve the Project throughout the development period.

**G. Please describe any water conservation methods or devices incorporated into the plan of development. What percentage of reduction is anticipated over conventional plans?**

Miami-Dade County developed water conservation recommendations that are intended to achieve higher water use savings. These recommendations were adopted in Ordinance No. 08-14 on February 5, 2008. The Applicant proposes to comply with the Ordinance.

Additionally, the Applicant water conservation measures and devices will be incorporated into the development plan as required by the City of Hialeah development regulations and, the Florida Building Code. For example, plumbing fixtures (e.g. toilets, urinals, shower heads, and sink faucets) that enable reduced water usage will be incorporated into new facilities as required by the City plumbing code under the Florida Water Conservation Act. In addition, during periods of severe water shortage, the Project will adhere to the requirements of Chapter 40E-21 of the Florida Administrative Code. The Project's landscaping will adhere to xeriscape principles, the use of moisture and rain sensor switches for irrigation, and design standards for irrigation systems to overthrow or overflow on to impervious surfaces. In addition, Beacon Countyline shall where feasible and practicable:

**(a) Install anti-backsiphoning valves between well and water pipes;**

**(b) Maintain a naturally vegetated buffer next to streams, lakes, ponds and wetlands;**

- (c) Use silt fencing or biofiltration (permeable bags filled with chips, compost or bales of straw) to control erosion during construction;
- (d) Designate appropriate location for washing vehicles and equipment – away from surface waters, storm drains and slopes that could erode, at carwash or at builders' shop with a sump during construction;
- (e) Immediately repair all equipment and vehicle leaks during construction;
- (f) Consider air assisted or compost toilets during design; and,
- (g) Consider water efficient appliances and equipment.

**H. Indicate whether proposed water service will be provided within an established service area boundary.**

The Property is in the City of Hialeah and the City's service area boundary.

**Exhibit 17.1**

**Letter of Available Service**

**City of Hialeah dated July 23, 2008**

**Miami-Dade WASD dated May 14 and July 15, 2008**