

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 17.1 Average Daily Potable Water Demand**. Potable water demand estimates are an average daily demand based on full year-round occupancy.

TABLE 17.1 Average Daily Potable Water Demand					
Proposed Development			Potable Water Demand		
Use	Amount	Units	Rate* (Gallons Per Day, GPD)		Demand
Warehouse	4,100,000	Sq. Ft.	0.02	GPD/Sq. Ft.	82,000
Office	1,000,000	Sq. Ft.	0.10	GPD/Sq. Ft.	100,000
Retail	550,000	Sq. Ft.	0.06	GPD/Sq. Ft.	33,000
Hotel	350	Rooms	100.00	GPD/Room	35,000
Total Gallons Per Day Demand					250,000
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.

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 17.2 Average Daily Non-Potable Water Demand for Irrigation (High Period)** is based on irrigation in this high demand period.

TABLE 17.2 Average Non-Potable Water Demand for Irrigation (High Period)			
Proposed Development		Irrigation Water Demand*	
Use	Acres	Acres Requiring Irrigation	Gallons Per Day
Warehouse	220	0.10 of Total	85,360
Office	75	0.10 of Total	29,100
Retail	60	0.10 of Total	23,280
Hotel	5	0.20 of Total	3,880
Total Gallons Per Day Demand			141,620
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.

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 demand estimates are based on 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. 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 speculation 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** – Increased the 5 gpd per 100 sq. ft. rate of the “Shopping Center (dry uses)” category, but increased the factor by 20% to account for higher usage associated with other varied retail categories that also might occupy the proposed retail space.
- **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 site in the south and/or the southwest corner to the City of Hialeah for development of public park/recreation and/or other public facilities. Since potable and non-potable water demands attributable to this area can vary significantly according to the types of uses the City elects to develop on the Site, no estimate of those demands is provided.

- 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 water 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.

Beacon Countyline is being designed to use interim capacity and long term capacity from the City. The City of Hialeah has committed to building a Floridan aquifer-sourced Reverse Osmosis (RO) water plant to increase the City's long-term capacity and further it is understood it will be located within the Beacon Countyline Property. The Applicant and the City have been working together to ensure the proposed RO plant will be operational by 2011. In the interim, the Applicant expects to utilize available capacity until the City's RO water plant is operational.

Wells and/or service from the potable system will be used for irrigation purposes until such time as the City will be able to provide reclaimed water to the Property. Should irrigation needs periodically exceed the capacity of these sources, use of stormwater ponds will be investigated, where possible, as a supplemental source.

- 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 potable water or irrigation wells on the Site. As noted above, low volume wells may be considered as a supplemental or alternative source of irrigation water if needs can't be met by reclaimed water service or other available sources.

In addition to the Reverse Osmosis plant, the City intends to locate a Floridan aquifer wellfield in and around the Property in as yet undefined location which will 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.**

The proposed development will have minimal irrigation needs such that On-Site wells, if needed to augment other sources, would have a minimal effect on other wells in the vicinity or groundwater resources.

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, but it is anticipated that major components of the distribution systems will be located in public rights-of-way and will be owned and maintained 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 **Exhibit 17-1, Letter of Available Service** requesting an indication of the ability and capacity of the City of Hialeah to provide water services to the Project and a response to the above information. The response will be forwarded when received.

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?

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 sets design standards for irrigation systems to not 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